

December 1951

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JOURNAL

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UNITED STATES ARMY COMBAT FORCES JOURNAL

Infantry Journal, 1904-1950

Field Artillery Journal, 1910-1950

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Vol. 2, No. 5

December 1951

COVER: Communications in Korea. (Department of Defense photo by a Signal Corps cameraman.)

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COMBAT FORCES JOURNAL is published monthly by the Association of the United States Army. Publication date: 25th of preceding month. Publication, Editorial and Executive Offices: 1115 Seventeenth Street, N. W., Washington 6, D. C. Copyright, 1951, by Association of the United States Army. Entered as Second Class Matter at Washington, D. C., additional entry at Baltimore, Md., under the Act of March 3, 1879.

Circulation Manager: D. A. Mulloy

One year \$5.00; two years \$9.00 when paid in advance; three years \$12.00 when paid in advance. Group subscriptions to units and activities of the Armed Forces \$4.50 each when paid in advance. Subscriptions for libraries, civilian groups or activities, and others not eligible for membership in the Association of the U. S. Army \$5.00 per year. Foreign subscriptions \$6.00 payable in advance. For other rates write Circulation Manager, Combat Forces Journal, 1115 17th St., N.W., Washington 6, D.C.

Advertising Director, Robert F. Cocklin

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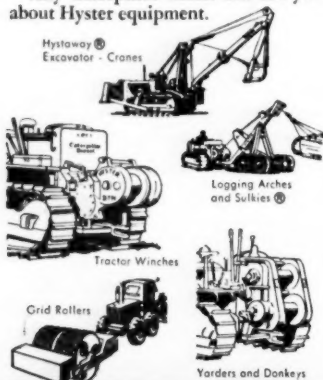
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TO THE EDITORS

Well Pleased

To the Editors:

Enclosed, please find my money order for two years' membership.

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Good luck and more power to you.

FRANK DONGKERS, JR.

607 North Third St.
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No Apologies Necessary

To the Editors:

Please accept this unit's profound apologies for having neglected to keep you informed as to the desirability of continuing its membership in the Association of the United States Army.

This unit wants to express its gratefulness to your continuous cooperation during the past year in keeping us informed of the changes, ideas and improvements of this great modern Army of ours.

We have enjoyed reading COMBAT FORCES JOURNAL immensely and want to assure you that no complaints have ever been made in connection with the efficient manner in which they have been received.

It is our wish to continue to be members of the Association of the United States Army as long as it is possible. Thank you again for your splendid cooperation during the past year.

CAPT. FRANCIS E. WALSH
Infantry, NGUS

Company G, 159th Infantry
Alameda, Calif.

Why He Quit

To the Editors:

I am an old member, who has let his membership-subscription lapse. You have asked me why. I will try to tell you.

In 1928 I volunteered to take the advanced infantry course in the ROTC at Cornell University. The doctor who gave me my physical examination told me that I should never be able to get into the army because my left eye was not up to standard. In 1943 I was drafted into the army. I might say here that in fifteen years I could have become quite a valuable soldier. Would you estimate the value of a one-eyed man who wants to be a soldier, in terms of two-eyed men compelled to be soldiers?

I was assigned to an incredible outfit. I'll sum it up in a quote from another member. "When my grandchildren ask me what I did in the Big War, I shall not

say I was in the — Battalion. I shall say I was a draft-dodger."

I subscribed to the *Infantry Journal* to have some connection with the Army and to find out what was going on. That was eight years ago. Now I am a civilian and have been for nearly five years. It is as a civilian then that your magazine comes to me. In each of your issues I find something interesting and instructive, but in my case not enough to give me a fair return for my time and money.

Now to complete the picture, we should come to what could be done to persuade me to reverse my decision. I, of course, am not important, but a number of people of the same general classification might be. What then, would I like to see in your magazine?

I would find intensely interesting, an account of the birth, growth, such changes of designation as took place, and the battles participated in by the regular infantry regiments. It wouldn't have to be a long article, or take up too much space. You could do one a month for a considerable period of time.

I would like to know about the men who won the Medal of Honor beginning with the first.

Then I should like to be told the truth, as far as it is possible to obtain it, about things that concern the Army. For instance, I assume that the 24th Division was fed piecemeal into the Korean meat-grinder from absolute necessity. That the decision was made that even if the division ceased to exist, the situation demanded its sacrifice in the hope that a disaster might somehow be averted. I would like the COMBAT FORCES JOURNAL to say that, if it is so.

I would like it to say that the 43d Division was snafued, or that it wasn't. And if it was, why it was.

You and I are parting company, reluctantly, I'll admit, because I am not getting enough out of it as a civilian. Were I a soldier though, naught but death would part me and thee.

ALBERT T. SHORT

1053 Prospect St.
Westfield, N. J.

Horses and Helicopters

To the Editors:

Your argument that the helicopter has effectively replaced the pack mule in Korea appears to have one major flaw—the people who are doing the fighting over there don't seem to agree with you. For the past year the press has continually printed reports of the need for pack outfits, pleas from many arms and services and from many ranks from private to

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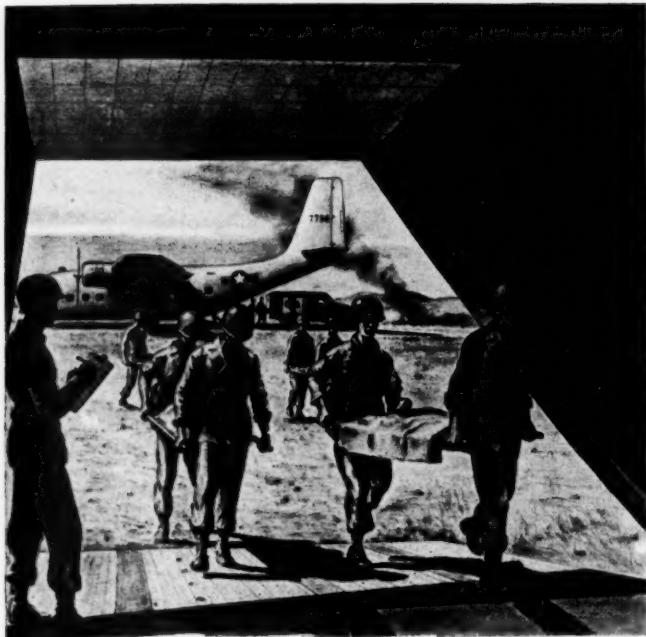


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at least one division commander.

Your own columns have supplied the information that Korean carrier units have been formed to hand-carry supplies in the mountains. Certainly this is a poor and expensive substitute for mules. And obviously the native carriers have not been replaced by helicopters.

CAPTAIN EDWARD L. BIMBERG

333 West 57th St.

New York 19, N. Y.

To the Editors:

In the September issue the writer of "Horses and Helicopters" says, "But we are convinced that our friends, the lovers of horse cavalry, are now one war too late" and "If the tank, the jeep and the two-and-one-half-ton truck didn't completely replace the horse, the helicopter will. Is filling it in Korea, we should say. For where can a horse go that a helicopter can't go easier and quicker?"

The above statements are not too well based on fact and show a great amount of wishful thinking.

Tanks, trucks—including the "jeep" and other wheeled and/or tracked vehicles—have proven their worth in modern warfare. The helicopter is proving its value in Korea. One thing must be remembered. Every piece of equipment has certain capabilities and certain limitations that govern its usefulness to the services, especially in combat.

Tanks and trucks, including the jeep, are sometimes road-bound and can travel across country only over terrain that is comparatively smooth and level. A pack animal, horse or mule, can be used in any terrain over which a soldier, combat equipped, can travel without the aid of his hands. Pack animals can take advantage of cover, terrain, woods and forests, darkness and they can move much more quietly than motor vehicles. Pack animals are not greatly influenced by bad weather or high altitudes.

The helicopter depends on weather and is limited to a comparatively low maximum altitude in which it may satisfactorily land and take off. It offers a remunerative target to enemy small-arms fire when operating near the front lines. How practical is the helicopter in rough terrain? What are its requirements in landing and taking off? Can it land and take off on steep hills or mountain sides, in heavily wooded areas, in ravines? Can it satisfactorily transport supplies in that type terrain? The pack animal can transport equipment and supplies to troops in that type terrain.

The question of economy is to be considered. What is the mortality rate of helicopters operating in the forward areas? What is the cost of the helicopter? A good pack animal, mule or horse, costs between \$100 and \$200. His mortality rate depends on enemy aggressiveness, artillery and mortar fire, the presence of

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DECEMBER, 1951

mine fields, his ability to take advantage of cover and camouflage and many other factors. But many pack animals could be lost before the cost of one helicopter would be reached.

A pack animal, horse or mule, can satisfactorily pack as much weight as five soldiers in good physical condition, can travel three times faster than the soldier and can cover much greater distances.

I do not mean to give the impression that I am against mechanization, because I am not. On the contrary, if it is possible to develop a carrier which will replace the pack animal I say let's do it but in the meantime let's be practical, not live on dreams and hopes and use this reliable and available means of supplying our troops in quasi-accessible areas. Let's use the pack animal.

LT. COL. ESTEL A. THOMPSON
Animal Equipment Dept.
Army Field Forces Board No. 3
Camp Carson, Colorado

More Accuracy

To the Editors:

I always read with interest all accounts of the accurate fire of the eight-inch howitzer. During the Italian campaigns of 1944 I served with a split-trail, eight-inch howitzer battalion and was amazed at the superb precision with which the shells would drop on small targets at long ranges. My conclusion at the time was that the piece was more accurate than the means of laying it, particularly for deflection. However, attempts to express this opinion met with derision. Being something of a long-range military rifle shooter, I knew that a 1903 model rifle with good ammunition would shoot into 3/4 minutes of angle at 1,000 yards, or about one mil. Consequently, I couldn't see why an accurate artillery piece could not do the same. It was usually explained that an artillery piece was much lighter in proportion to its projectile and propelling charge than was the rifle, its recoil was relatively greater, and anyway pinpoint accuracy was not necessary.

During the war, it was freely expressed at Fort Sill that target hits were rare and somewhat accidental when they did occur. Again, I couldn't see why this should be so.

Nowadays, I am in an outfit which is equipped with self-propelled eight-inch howitzers. The forty-two-ton weight and broad trail of this piece make it extremely stable and observation based on firing again leads me to the conclusion that accuracy is finer than the methods of laying can exploit.

Our present panoramic sight permits of one-mil adjustments in deflection. The rifleman would be disgusted with corrections that coarse. We artillerymen need something more precise.

Speaking of respective weights of pieces in regard to projectiles is interesting. The

1903 rifle weights about nine pounds. The most accurate bullets in .30 caliber were the 180-grain weight. At 7000 grains to the pound, the rifle weighed 63,000 grains, or 350 times projectile weight. The eight-inch howitzer, self propelled, weighs 42 tons. The shell weighs one-tenth of a ton. Thus the howitzer outweighs its projectile 420 times. Inaccuracy on that score is a poor argument.

Give us something better to aim with. Kentucky windage is as out of date as grapeshot.

CAPT. FREDERICK W. BECKETT, JR.
Artillery
756 FA Bn
Fort Bragg, N. C.

Homemade Mines

To the Editors:

During combat in Korea my husband, Captain James J. Dwyer, who is fighting with the famous Wolfhounds, found the men needed mines—and there were no mines. He came up with a solution.

No one knew what a fougasse was, but my husband did—and he also knew how to make one. I do not want to give the impression he invented the fougasse—the French invented it. My husband remembered reading about them, and owing to his knowledge, the mines were made by men of Company A, 27th Infantry Regiment, and they were used successfully.

Don't you think that this effort is worth a page in your COMBAT FORCES JOURNAL? The fact that there were no mines—plus the fact that my husband knew what to do about it—and did so—helped some of his men and helped destroy the enemy when they attacked should be worth a mention in a magazine for the combat soldier. I'm not too familiar with the ways and means of war, but I have a description and a picture of the fougasse from *Stars and Stripes* (Pacific edition).

A 55-gallon drum containing 45 gallons of gasoline, plus 10 gallons of crankcase oil. Around the top they would enough primercord to cut the top off the drum when it exploded. The primercord was connected to six pounds of TNT placed around the bottom of the drum. The wrapping at top would cut the drum and in just a fraction of a second the TNT would explode, squirting the gas out in a cloud. Usually the explosion ignites the cloud, but just to be sure, they put a pyrotechnic, an incendiary grenade, an illuminating grenade, or a rocket on. From there on it could be (and was) handled like any other mine. It could be fired by remote control or with a trip wire.

I'm not sure my explanation is clear, but I hope so. I would like to see my husband get a write-up on what I think is a job well done. He is still in Korea and I'm writing this letter on my own.

We subscribe to COMBAT FORCES JOURNAL and I read the magazine, too. Hope you can mention the story of my husband

and the fougasse—as he calls it, "his baby."

MRS. LOIS M. DWYER
3003 Manhattan Blvd.
Tampa 9, Florida

• Fougasses were mines placed at the bottom or small shafts nine to twelve feet deep and fired from a secure spot by means of a power-hose train, or otherwise. The chief difficulty in using the original fougasses lay in having to explode them at the instant the enemy is passing over them. But the use of a trip wire overcomes this handicap.

Mrs. Dwyer's husband is Captain James J. Dwyer of the 27th Infantry Regiment.

Noncoms

To the Editors:

In the article, "Artillery in Korea," (August issue) there were these words: "Far too often, officers are handling jobs which belong to noncoms. This lowers the prestige of the noncoms and affects the efficiency of the organization. This weakness is prevalent not only in Korea, but throughout the Army."

I second the motion. I have said many times that one of the big things wrong with the Army these days is the loss of prestige of the lieutenants and noncoms and the terrific loss of efficiency of the noncoms.

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Medal of Honor

Major General William F. Dean, of Berkeley, California—Medal of Honor. In the hard early days of the Korean War, when it was Red armor against American rifles, General Dean chose to fight in the most seriously threatened parts of the line with his men. At Taejon, just before his position was overrun, he was last seen hurling hand grenades defiantly at tanks.

General William Dean knew in his heart that it's every man's duty to defend America. You know it, too. The General's job was in Korea and he did it superbly well. Your defense job is here at home. And one of the best ways to do that job is to start right now buying your full share of United States Defense* Bonds. For remember, your Defense Bonds help keep America *strong*, just as soldiers like General Dean keep America *safe*. And only through America's strength can your nation . . . and your family . . . and you . . . have a life of security.

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"a commissioned officer will supervise this detail." So the sergeant—or the corporal—says, "To hell with it. If the lieutenant is going to do my job, why should I worry?" So when you want the noncom to do something on his own, he has no initiative, sense of responsibility, or ability to make a decision. Gone, temporarily, I hope—is the day when a first sergeant could really run a company or battery in anything but minor detail or you could expect a corporal to be anything but an errand boy.

There are probably several reasons for this state of affairs. One may be that the rapid expansion of the Army during the war forced us to hang stripes on men before they were ready for them and knew what they meant. Another is the attempt by some people to "democratize" the Army. The Army is no place for democracy. Then there are the recent series of changes in the system of ratings. I might say, "There are too many noncoms (?)." The question mark is the point of that statement. When they threw out the old system of specialist ratings, they started the noncom on the downward trail as far as prestige and efficiency is concerned.

The result of all this is that many of the real noncoms these days have to have it spelled out to them and you have to breathe down their necks to get it done right. They have forgotten many of the little things that go to make up and maintain good discipline.

CAPTAIN ARTILLERY

% PM
New York, N. Y.

Night Fighters

To the Editors:

From my observation in World War II I believe that each division should have a special company of select volunteers to guard the division front lines at night. These men would be volunteers from the parent division and get extra training in night fighting. They would rest during the day and receive at least two hot meals.

They would be brought forward to see the "lay of the land" before dark. Then depending on the situation they would:

(1) Mount guard for the infantry who had fought during the day.

(2) Go out in front of the MLR and lay in ambush for the enemy.

(3) Actively patrol, between our lines and the enemy's, keeping the enemy on the alert and harassing him.

The advantages of having fresh rested fighters at night should be great. It would allow our regular troops to rest easier at night and keep the enemy off balance and sleepless.

MAJOR THOMAS N. CQURVOISE

Box 192
Georgetown, S. C.

COMBAT FORCES JOURNAL



Comment for the Combat Forces

Training Makes the Soldier

THE assistant division commander was talking. "When I learned that I was to be rotated home from Korea to join a training division I began to ask regimental, battalion and company commanders how they thought the training of the reinforcements they were getting could be improved. I got so many suggestions for emphasizing this part and that part of training I had to decide that what the combat leader wants are men who had a lot more training in *everything*. But of course you can do only so much in sixteen weeks."

The emphasis on physical training and night exercises, the General thought, was all to the good, though he had one reservation about night training. "The training cadre can't do much about correcting a man's mistakes at night because they can't see him. But if you go through the routine during the day and then repeat it at night you get a chance to show them how to do it the right way and also give them some idea what night combat is like."

"I can't get away from the thought that the big job of the training divisions is to give the recruit a firm grounding in weapons, introduce him to habits of discipline and prompt obedience of orders, and get him into good physical condition. Indoctrination is important; indoctrination to the sounds of battle—we can't do much about that—and the reasons why he is here in the Army and why it is important to him and his country to be a good soldier."

"With that kind of basic training a man is ready to join a combat outfit and learn the tricks of battle. If he is lucky his outfit will have a chance to put him through his paces before he goes into combat for the first time. Sometimes that can't be done, of course, and a recruit finds himself in a hot fight without having gotten his feet on the ground, so to speak."

"That doesn't happen often. The combat units make every effort to give new men a firm grounding in their ways of doing things and really prepare him for battle. They're doing that in Korea just as we did it during the last war."

Joint Chiefs on Air Power

WE CUT this department short this month in order to give you the essentials of General Bradley's important statement on why the Joint Chiefs think a significant increase in the size of the Air Force and Naval aviation essential.

Every soldier will be vitally interested in how and why the Joint Chiefs came to this decision.

Rotation

AN OPINION poll of some 2,500 soldiers is reported to have revealed that ten per cent of them said that Infantry was the branch they preferred. Another eight per cent said they were willing to volunteer for the Infantry, and still another seven per cent said they would probably volunteer for the Infantry if combat pay

was set up or a limitation was established on the time an infantryman had to serve in a combat zone.

What is significant here, we suspect, is not that these soldiers would be willing to be infantrymen if they could get an extra \$50 or \$100 a month but that they would be willing to be infantrymen if they could be assured rotation after a certain length of time. The length of time is unstated but we'll bet our next month's flying pay (\$000.00) that the soldiers who made that stipulation had in mind a considerably shorter tour of combat duty than was common to World War II infantrymen.

This alarms us a little. We know that there was nothing equitable about the days infantrymen spent in the lines during the Second World War—the sacrifices of the few were all out of proportion. But it is intolerable to attempt to fight a war under the handicap of a rigid limitation on the length of combat service of soldiers of the infantry, or any other arm or service.

We doubt that the feeling that rotation is one of the natural rights of soldiers has arisen because the Army has been able to rotate most men who served in Korea last winter. Its origin goes back to the manifestly unfair system of the Army Air Forces in World War II. The AAF was so swollen in size that it could make rotation quite easy—and at a time when the Infantry was extremely short-handed. The unfairness of this created a morale problem during the war and much bitterness after it. And, quite obviously, the effect still lingers.

PARABLE OF THE TALENTS

Unto Everyone Which Hath Shall Be Given

A Resolution addressed to the Congress by the 45th Infantry Division Association in convention assembled

WE HAVE NOTED with extreme interest during the past year that the shades of Montezuma and Tripoli are once more abroad in our land. From many diverse interests and areas, voices are speaking with a remarkable uniformity of expression. These voices echo on the floor of Congress and there is provoked a flood of bills, also of remarkable uniformity—"only the Marine Corps can provide an economical and efficient fighting force; therefore, there must be no fewer than 400,000 Marines with their Commandant seated on the Joint Chiefs of Staff."

We marvel that these many voices should accept so blindly the information given them, closing their eyes to the record. However, we realize that the Marines are jealous of our record and we can look with tolerance on the manifestations of their jealousy. Therefore, we wish to bestow our official recognition upon the distinguished achievements of the United States Marine Corps and upon the individual spirit and gallantry of its members. They are comrades-in-arms; their performance on the battlefield, like ours, is of that highest order which can speak for itself without extravagant propaganda, claims and demands.

Consequently, we wish to address ourselves, on a few matters of record, to the many voices claiming to speak for the Marines. During World War II, we participated in four major amphibious operations. This was equalled by three of the six Marine divisions and exceeded by none. We were overseas during actual hostilities for one year and eleven months. This was exceeded by three Marine divisions. But during our time overseas we were

in combat (and by combat we mean that we had a sector in actual contact with the enemy) for 511 days, a period unequalled by any Marine division or for that matter by any three Marine divisions. In fact, the total combat time of the four Marine divisions having the most only exceeds ours by ten days. In regard to the numbers of enemy taken prisoner and the miles of territory covered in the course of our campaigns, we so far outdistanced the Marines in aggregate that it would only be embarrassing to them to cite the figures here.

Those of us to whom Bloody Ridge in Sicily, Salerno, the Volturno River, Anzio, the Siegfried Line, Aschaffenburg, Nuremberg, and Munich are more than geographical locations need no testimony that the foregoing was accomplished by hard, bitter fighting every day and every mile. To any who might still suffer the delusion of one member of Congress who wrote that the Marines have traditionally done the "most difficult chores in war time," we simply direct their attention to the fact that the foregoing well-known battles are but a few of those participated in by the 45th Infantry Division in the course of earning eight battle stars in campaigns in Sicily, Italy, France, and Germany.

WE, THEREFORE, urge the Congress of the United States, in the interests of constituting an economical and efficient fighting force, to provide that the 45th Infantry Division be raised to a strength of not less than 400,000 men and that their commander be seated as a member of the Joint Chiefs of Staff.

There ought to be some kind of equitable rotation system, to be sure. But we don't see how we can successfully fight a war—big or little—handcuffed to a policy of releasing men after a certain length of time, without regard to the nature of the conflict or the situation that may exist at any given time.

It can't be done and we have enough faith in American fighting men to believe that if the facts were put to them squarely they wouldn't expect it. And we also think that the leaders of our fighting forces are humane enough to want to give every fighter—ground, sea and air—every consideration. But to tell our leaders that they must fight and win our next war with armies, navies and air fleets that can melt away almost as swiftly as did the armies made up of thirty-

and ninety-day enlistees in our earlier wars is not only intolerable but fantastic.

As Only Ike Can Say It

"Korea has been to [Europeans] a great inspiration. Inferior numbers, armed with modern equipment, led intelligently, have served magnificently and I should like, if it's not out of place for me, to pay tribute to the series of brilliant commanders that Korea has had. It has had the cream of the American Army, in so far as I am acquainted with them, also the American Air Force and the American Navy.

"We have produced no more brilliant leaders than General MacArthur, General Ridgway, and General Van Fleet, who, by the way is a class-

mate of mine who started in the Normandy invasion as a colonel and ended up commanding a corps."—GENERAL DWIGHT D. EISENHOWER at a press conference in Washington on 6 November 1951.

Take It Easy

OUR reaction to the Compton Commission report to Congress outlining a long-range plan for a universal military training and service program was that universal service is about as close to enactment right now as it has ever been in its long and bedraggled history. But that, actually, isn't very close. And so if we temper our enthusiasm over the sensible and apparently workable plan Dr. Compton and his fellows produced, it is because we find it hard

to believe that Congress will do much more than talk themselves out of it come January.

We base that judgment on many years of compassionate observation of congressmen wrestling with this issue. A congressman, we have noted, can vote a loud "yea" to active service draft laws because by so doing he is meeting a national emergency head-on and doing something about it. But no such compulsions attend his consideration of universal service. And he doesn't like to be called a "stooge of the militarists" any more than we soldiers like to be called militarists. So he votes against universal service but for a large Army, Navy and Air Force.

We sympathize with our congressman in his plight. But we wish sometimes that he and his constituents would take the long view and think of the blood and treasure that might have been saved in the past ten years—not a very long span of time!—if there had been a functioning UMT back in 1939-40. Or even a much shorter view and consider what a functioning universal service law in 1947-50 would have meant on and after 25 June 1950.

We hope we are wrong. We hope the Congress sees its duty and does it. But we wouldn't advise you to write Career Management that you are interested in an assignment to one of those National Service Training Corps camps that would be set up. Not yet at least.

Decisive Battles

It was a hundred years ago this year that Sir Edward Creasy published *Fifteen Decisive Battles of the World*—beginning with Marathon and ending with Waterloo. How many battles should now be added? An Englishman, writing in *Journal of the Royal United Service Institution*, suggests "the Marne in 1914, the Battle of Britain, the defeats of Rommel at Alamein, and the triumphant defeat of the Japanese Fleet at Midway."

What do our readers say? We would like to hear from you, bearing in mind that Sir Edward's judgment seems to have been based on this sentence from his original book: "... battles of which a contrary event would have essentially varied the drama of the world in all its subsequent scenes."

DECEMBER, 1951

WHY WE MUST HAVE MORE AIR POWER

General Omar N. Bradley

Excerpts from an address before the American Petroleum Institute at Chicago on 8 November 1951.

If the balanced collective forces [of NATO] are to be effective, we must buy more air power now.

Before making our recommendations [the Joint Chiefs of Staff] reviewed the various courses of action open to the avowed enemy of freedom—the Soviet-satellite combination which continues to follow a course of international expansion toward its announced goal of ruling the world.

Briefly, the four possibilities are these:

First . . . the Soviet Union might change its tune, prove its peaceful declarations, agree to inspection on both sides of the Iron Curtain, loose the chains of its unwilling satellites, and sincerely resume friendly relations with the free world.

Second . . . the Communists might agree to an armistice in Korea, cease their fighting in Indochina, and incite no further outbreaks of hostility. Instead of small wars, the Kremlin may decide to continue only its cold war methods, attempting to pick off more nations by subversion, propaganda and economic upheaval. . . .

Third, and relatively more dangerous for the free world, the Soviet Union might continue its present methods, of aggression. While continuing the cold war, the Communists would also persist in promoting small wars—more Koreas, more Indochinas—around the world, continuing to use other satellite states to do their dirty work.

Fourth, and the greatest we face, would be the unleashing of Soviet-satellite forces in a World War III.

It is in the light of these four possible situations that we have had to plan a defense of the United States which is adequate, flexible, and within our means. Fundamentally, we are trying to achieve a balance of forces which makes the greatest use of our industrial potential, derives the greatest striking power from our atomic supremacy, achieves the greatest strength from our limited manpower.

To meet any one, or any combination of the four conditions, we must have additional forces in all three services.

The need for ground forces is firmly established. In the cold war, our Army in Germany was as much a symbol of United States determination as any other deterrent to aggression in Europe. In the Far East, the war in Korea has proved again the need for having a ready striking force of ground power available at the scene of the aggression. . . .

To meet the ever-increasing threats of aggression, and to have a balanced deterrent to the Soviet ground power, our Army and friendly armies must be increased, and their readiness improved.

Our need for a Navy is equally as great. Any nation which depends so heavily on raw materials gathered from abroad must keep the sea lanes open or sacrifice its economy and its standard of living.

* * *

This year, in our recommendations for additional air power, we are recommending a considerable increase in Navy and Marine air strength. Based on carriers, and moving in task forces which include their own built-in antiaircraft defense, the effectiveness of this naval air power is greatly increased by its flexibility.

OUR need for balanced effective forces equal to the tasks that the enemy's capabilities could thrust upon us, finds our present Air Force assuming more than its share of the calculated risk.

To prevent disaster, our Air Force must have, in combination with Canada, an improved warning network and a fighter-interceptor system to meet possible atomic attack. This effort can be most effective when coupled with a strong Civil Defense Program.

At the same time, the Air Force will be called upon to win the air war. The responsible leaders of our Air Force look at the potential air strength of the enemy, and are aware of the size of the task which could confront them. Day by day, they have to live with the problem of meeting several thousand tactical aircraft in the air over any battle zone.

Every day they have to face the problem of being ready to strike back hard and immediately if we are attacked at home, or if our friends in Western Europe are attacked.

Modern airmen know that the only way to win a decisive victory in the battle for air supremacy is to destroy the enemy air force and its bases of operation. The requirement has to hit the enemy in the air, penetrate his defensive screen and strike his home bases, and consistently and overwhelmingly concentrate air power to attack his industry and his resources. Only by these means can the advance of our forces, and the defeat of the enemy, be assured.

One only has to analyze the growing capability of Soviet-satellite air strength to know the increasing need for additional air forces of our own. In order to apply the proved and classic principles of war—the principles of mass, economy of force, movement, and surprise—to this modern problem, we must have enough air power—readily available air power—comprised of modern planes equipped with the most advanced weapons at hand, flown by the best trained crews in the world.

* * *

AS THE Joint Chiefs of Staff reviewed the air requirements, we considered the share of our calculated military risk which the Air Force faces. It was agreed that we must greatly increase our combat air power. Our recommended program will accomplish this with the help of American industry.

War by war, the art and science of applied military power has become more complex. American strategy today is no exception. Since 1945, when the first atomic cloud rose in the New Mexico desert, another unknown factor has been added to the military equation.

... It is public knowledge that the United States has been able to explode more than 18 atomic bombs in the test and improvement of its military weapons and two in combat. Furthermore, we are experimenting with other methods of delivery of the atomic attack, and are developing atomic energy as a source of power.

In September 1949, the President announced the first atomic explosion conducted by Soviet Russia. Two years later—in the past two months—the Soviet Union has exploded two bombs in tests.

I believe that the free world can assume some measure of confidence in our atomic leadership both in numbers of weapons and in technical development.

* * *

Furthermore, since the best method of delivery is still the airplane, our evaluation of the program must include the efforts put forth in the improvement and production of aircraft to carry atomic bombs of all sizes. The yardstick by which we measure progress must include the defense measures which we are perfecting and providing against the possibility of atomic attack on our industry, our resources and our forces in the field. Finally, we must also count the additional amounts expended for the proper training of crews and technicians to handle the atomic bomb and to supervise its accurate delivery.

The Joint Chiefs of Staff have consistently supported the ever-increasing development of atomic weapons, and the means of delivery. Furthermore, the Joint Chiefs of Staff are in accord with the Atomic Energy Commission and members of Congress in a program to enlarge the base of our atomic energy industry.

* * *

AS THE atomic weapon cuts across the more prosaic and conventional plans and forces, there is the permanent American desire to substitute machines for men, and magic weapons for conventional armaments.

I was taught to fight freely and liberally with machines in an effort to save the lives of my men. But at no time did these machines ever become a substitute for sufficient and well-trained troops.

The new weapons we are developing can certainly speed the winning of war, and reduce its cost in human lives, but they cannot win a war by themselves. There are many military targets against which an atomic bomb would be ineffective or wastefully applied.

If an enemy wanted to disperse his forces so that soldiers walked 100 yards apart, they could march across Europe tomorrow in the face of the greatest atomic power on earth—unless other men were there to stop them.

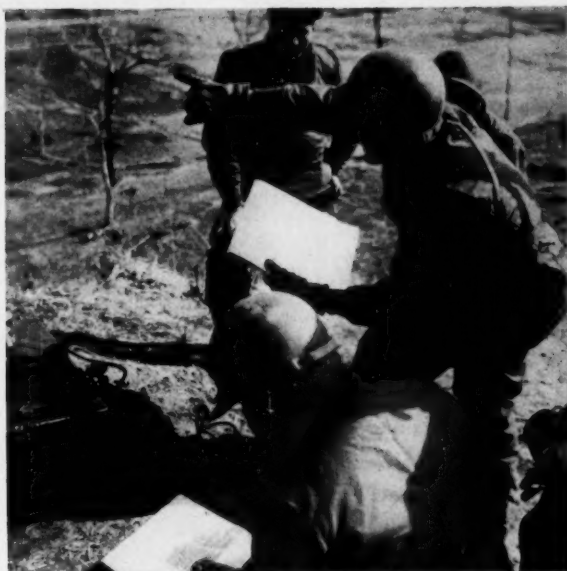
However, if we have the means to make an enemy concentrate his forces, there are many methods available to destroy his military offensive power. With our balanced forces, and our collective security efforts, we can achieve this goal if war comes.

While machines may save lives, they cost us dollars and time. The more complicated the machines and weapons become, the more training the men need. It would not be fair to the man or to the Nation to entrust him with a million-dollar machine against a skilled enemy when he has not had sufficient training. Furthermore, his life, and the lives of his comrades, would be in jeopardy.

COMPANY COMBAT TEAM

CAPTAIN SIDNEY B. BERRY, JR.

When every weapon of the Army and Air Force backs him up, the young company commander is a busy man with tremendous responsibilities.



The rifle company commander works intimately with forward observers and commanders of all attached units.



Communications are all-important and many extra radios are used.

IN January 1951 during the early stages of the Eighth Army's counter-offensive against the Chinese-North Korean forces, company combat team tactics were first successfully used by the 35th Infantry. Six months of fighting in mountainous Korea had taught us that the rifle company was the basic combat unit in this kind of warfare. That fact was dictated primarily by the high degree of compartmentation resulting from the mountainous ridges of Korea and by the extended unit frontages resulting from too few troops in too much country. Battalion commanders found it impossible to personally supervise their battalion frontages except by radio. Thus it became standing operating procedure to make attachments to rifle companies, turning them, in

CAPTAIN SIDNEY B. BERRY, JR., Infantry, is a 1948 graduate of the Military Academy. In Korea he commanded a company in the 35th Infantry, 27th Division.

effect, into combat teams, commanded by the rifle company commander, under the supervision of the battalion commander.

The rifle company commander found he could bring to bear upon the enemy to his immediate front every weapon available to the Eighth Army. First, of course, were those weapons integral to the rifle company.

The weapons of the heavy weapons company were on tap. Normally a heavy machine gun section was either attached to or put in direct support of each of the two assault rifle companies, and a forward observer from the 81mm mortar platoon was with each company commander. The 75mm recoilless rifles were usually in general support, firing on targets of opportunity or targets designated by the rifle company commander over the SCR-300 radio. The fire of the 4.2-inch heavy mortars was obtained by the heavy mortar forward observer.

The artillery FO could fire his own battalion of 105mm howitzers and also call in the fire of the 155s, the



The rifle company's own weapons come first in attack or defense



Antitank guns provide heavy direct-fire support

Armor is a basic part of the company combat team



eight-inchers, and naval gunfire whenever it was within range. Air support was available to the combat team commander through several channels, or through the tactical air party with battalion or regimental headquarters. A basic part of the company combat team was the armor, both tanks and M16 half-tracks mounting caliber .50 quadruple machine guns; the armor was usually attached.

Method of employment of the company combat team was determined by the terrain and by the situation, but a general pattern soon emerged. As the enemy normally defended major ridge lines and hill masses, covering the draws with automatic weapons fire and with mortar fire, we found it best to attack up fingers and ridgelines to secure the high ground. The company commander who found himself able to attack up a ridgeline in anything broader than a platoon front considered himself fortunate. Assault platoon leaders more often than not found themselves attacking in platoon column. Whenever at all possible, a second platoon was used in a flanking movement, if only to split the fires of the enemy. The support platoon was held in a central position. One 57mm recoilless rifle was normally attached to each platoon. Whenever possible the 60mm mortars were employed in battery.

As the attack developed, the combat team commander usually found his forces seemingly spread all over the face of his 1:50,000 map sheet. One platoon attacking up one finger, another platoon hooking to the right or to the left to attack up another finger, the support platoon centrally positioned, tanks and half-tracks on the low ground, a section of HMGs to control, FOs begging to shoot, and often the T-6 air spotter plane asking for a target for a flight of P-51s or F-80s already overhead. The combat team commander's job was to work these elements into a coordinated fighting team. His success or failure was measured in terms of men's lives.

WE found it advantageous to add many items of communications not provided by standard tables of equipment. SCR-536s were carried by the company commander, the executive officer, the first sergeant and the platoon leaders for the company command net. The 60mm mortar section

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had its own fire control net set up with SCR-536s. Platoon command nets were set up with the platoon leader and the platoon sergeant carrying 536s; and if the situation demanded, the necessary squad leaders would be given 536s. SCR-300s largely duplicated the distribution of SCR-536s, because of the lack of dependability of the 536 and because of the great frontages which were assigned to units. Each rifle platoon leader had an SCR-300, as well as the company commander and the executive officer. The first sergeant, who remained with the company transportation, had a 300 over which he would follow the progress of the attack and would receive calls for ammunition, rations, litters, and litter jeeps. The 81mm mortar and the 4.2-inch heavy mortar observers had SCR-300s on their own firing channels and the artillery FO had an SCR-619 artillery radio. Nor was it unusual for the company commander to receive a call over his SCR-300 from the T-6 spotter plane pilot who in many cases monitored the 300 channel of the battalion over whose area he was working—"Able 5, this is Mosquito Cobalt. Do you have a target for me?" Invariably Able Six would have a target for him.

THE position of the leader is important—and each combat leader must determine his for himself. I found that I could best control the action by placing myself either with or directly behind the assault platoon, if it had the major portion of the fighting to do; if two assault platoons were widely separated, I would place myself between them with the support platoon. Leaving the first sergeant in charge of supply and evacuation, I used the executive officer primarily to help me control and coordinate our many weapons and units. It was the executive officer's job to control what we called, perhaps incorrectly, the "base of fire." This consisted of the FOs, the HMGs, and the fires and placement of the tanks and half-tracks. From my own position with the assault platoon I could best determine how the supporting fires could most effectively be used and so inform the executive officer. I strongly recommend this use of the executive officer. It helps the CO immeasurably, gives him freedom of movement unencumbered by FOs.

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Without artillery support the Company Combat Team wouldn't get far



Forward air controllers call for air strikes for the CCT

Infantry heavy weapons add firepower to the CCT's front lines



Basic loads of ammunition were carefully weighed. Each rifleman carried from two to four bandoleers of M1 ammunition, in addition to the full cartridge belt which was used only in emergency. Men armed with carbines—and in the 35th Infantry, every man carried a long-barreled weapon—carried a minimum of 150 rounds of ammo. Every man carried at least three hand grenades—one white phosphorus and two fragmentation. Many men chose to carry two additional hand grenades in the harness of their strip pack. Each rifle platoon had four rifle grenade launchers for which they carried WP grenades—whose effect against bunkers was considerable—an assortment of pyrotechnics, and grenade adapters. The amount of ammunition carried with the crew-served weapons varied with the ruggedness of the terrain and the number of ammo bearers.

Evacuation was speeded by attaching a litter and litter team to each assault platoon. This in addition to the medical aid man already with the platoon. If a man was critically wounded, he was put on a litter and started down the hill immediately.

Following the support platoon was the company's fifth platoon, a carrying party of some twenty or thirty Koreans, who carried ammunition, rations, water, additional litters, and communications equipment. This was available for immediate resupply. These Koreans were also invaluable as litter bearers.

Three of the company jeeps, loaded with ammunition and supplies and under control of the first sergeant, followed the company as closely as possible. The 2½-ton truck and the fourth jeep remained with the kitchen; the fourth jeep hauled hot chow to the company.

AN attack would begin with an initial barrage and covering fires on the objective. Under this fire the riflemen moved toward and up the fingers or ridges. Tank guns and the 75mm recoilless rifles fired into known or suspected enemy bunkers and positions, while the HMGs and quad .50s covered enemy-held slopes with a blanket of fire. Artillery fires on the forward slope of the objective employed proximity fuze for open emplacements and fuze delay for the covered emplacements. The mortars

placed their fire on the reverse slopes which might conceal enemy personnel and mortar positions. As the riflemen drew within assaulting distance they took up marching fire. As they drew nearer the enemy positions, they increased the volume of the marching fire. Supporting fires would hold on the enemy position until the last possible second before being shifted to new targets on the flanks or on ridges beyond the riflemen. Simultaneously with the shifting of the supporting fires, the riflemen launched the assault with fixed bayonets. They closed rapidly with the enemy. (It has been our experience that the quicker you close, the fewer casualties you have. Once he has closed with the enemy it is the doughfoot's own personal battle, one in which he has proven himself the superior of the North Korean and the Chinese Communist.)

The assault platoon having gained a foothold on the high ground, the attack must be pushed vigorously until all of the high ground is secure. Speed and aggressiveness are essential once the enemy's defenses have been breached. If the assault platoon is capable of continuing the attack, it moves ahead without pause; while the support platoon is moved up to occupy the ground behind it and to mop up any enemy hiding in bunkers or emplacements. The support platoon evacuates casualties and PWs taken by the assault platoon, leaving the platoon free to exploit the advantage it has gained. The FOs and supporting weapons displace forward with the support so that they may support the continued attack.

The final objective for the day having been secured, reorganization and resupply is begun in earnest. Every effort is made to reorganize, resupply, to dig in and button up before darkness falls: for it is during the night that the Communist forces launch their counterattacks.

The company position organized, casualties and PWs evacuated, food, water, and ammo resupplied, communications set up, the fire plan made, and—perhaps strange to veterans of the last war—plans of withdrawal made, the company combat team commander settles down to snatch a few winks of sleep before the telephone rings and the battalion commander is telling him what mountain his company will take tomorrow. One damned mountain after another.

FLAME HI

**LIEUTENANT COLONEL
WALTER L. MILLER, JR.**

MEN and animals have an instinctive fear of fire. Although man has learned to control fire and to use it, he fears it. This fear may be so great as to paralyze him or make him panic.

Allied armies in Northwest Europe during World War II found that the best enemy troops broke and ran when attacked by flame. Many soldiers surrendered when flame throwers were used. This effect of flame is not understood as well as it should be. But men (and animals) instinctively know that distance is the only protection against flame. So they run. Training cannot overcome this reaction.

The full effect of flame comes through consistent use. When the enemy digs in, he should be attacked with flame. The relatively short range of flame throwers is not a handicap, and it is when the enemy is dug in that the greatest psychological effect is achieved.

Flame has several effects.

It is lethal, causing death by burning or asphyxiation. Shock may also account for some deaths. Large numbers of deaths will not occur if the enemy surrenders rather than face the flame.

Flame has a searching and neutralizing effect. It can reach into defiles and crevices. It can neutralize the

LIEUTENANT COLONEL WALTER L. MILLER, JR., Chemical Corps, is a paratrooper who served during World War II as an infantryman. A graduate chemist, he joined the Chemical Corps after the war.

FLAMES THE INFANTRY

Flame throwers can help the infantry in an attack or on the defense, in darkness or daylight. But they should be used in mass; their tactics understood



The portable flame thrower has a range of 25-40 yards

ground it covers and force the enemy to evacuate. Trenches, weapons pits, pillboxes, hedgerows, forests, vehicles, and tanks are good targets. When the enemy cannot be seen but is suspected, the area coverage of a flame-throwing weapon will flush him out. It can reach onto the reverse slopes of hills or dikes. It can blind pillboxes by penetrating the embrasures, and it can reach into the corners of the pillbox to kill or neutralize the crew.

Flame has an incendiary effect. It will set brush, haystacks, barns or ammunition on fire. Flame can be used to start back-lighting fires at night to outline enemy positions.

Finally, flame has a psychological effect of great value. Because he can see and hear it before it reaches him, a man has time to decide: he must

stand and fight, take shelter, or surrender.

THE flame thrower is an excellent supporting weapon for the infantry. It can be used by day or night, in good or bad weather. But there is little understanding of the use of flame especially in mass. The infantry has looked upon the flame thrower as a special weapon for special situations and not as a normal supporting weapon. During World War II the Army had only limited experience with mechanized flame throwers and armor had this as an additional, rather than primary mission. This meant that usually the flame mission was considered after normal weapons failed. Consequently most of the value of flame was lost. Another rea-

son behind the lack of the use of flame, may have been because the flame thrower is a Class IV item of supply rather than a Class II organizational item. The Marines, who have had considerable success with flame throwers, carry them as Class II items of supply.

The infantry, if it is to have efficient flame support, needs three types of flame throwers. First and most important, is a light mechanized flame thrower mounted on a vehicle of low silhouette which under covering fires of other weapons can dart in against enemy entrenchments and pillboxes. Cross-country mobility is essential. We do not have such a weapon and vehicle now. But the Canadian Army has had considerable success with a light mechanized flame thrower of this type. It moves rapidly and in-

The mechanized flame thrower has a range of 50-70 yards



flicts shock on the enemy. It can accompany attacking infantry if the terrain is not too rough.

We also need the existing portable flame thrower. This weapon can accompany assault units where the mechanized flame thrower cannot go. We can use it against well defended point targets which require careful planning and adequate supporting fires, including mine field clearance to neutralize. Among the disadvantages of the portable flame thrower are its weight, small fuel capacity and short range. It cannot keep up with the assault elements over long distances. To offset its weight disadvantage, it could be carried forward on the light mechanized flame-thrower carrier. The portable flame thrower has to have the close support of other weapons.

A third requirement is for a tank-mechanized flame thrower. This is needed to assault well-defended positions. It could also crash through and behind the enemy, cut off his retreat routes, hit his reserves or attack supply lines, dumps or command posts. This weapon may either be the tank-trailer type of flame thrower or the integral mechanized flame thrower. The integral type flame thrower would probably be better for the infantry as not so road-bound.

THE principle of mass applies to all types of flame throwers. Mass flame has an extremely demoralizing effect upon the enemy. It covers a larger area, and by alternating bursts of flame among several flame throwers, the target can be kept under fire. Flame thrower crews must know what flame can do and be well trained and organized. Infantrymen should be taught to operate flame throwers and learn how to mix the fuel. The Canadians have been highly successful in operating flame throwers because their training has been thorough.

I believe flame thrower units should be organic to the infantry regiment or as a separate organization within the regiment as a part of the service company. I would suggest a flame company of five officers and eighty-two enlisted men for each regiment. The operational duties of the company would be performed by three platoons of one officer and fifteen enlisted men each. Two of the platoons would operate light, portable flame throwers (four each) and the other

would have four mechanized-tank flame throwers.

THE light mechanized flame throwers should accompany the infantry in all combat operations. During the approach march it could move with the advance guard. When the advance guard comes under fire, the normal base of fire would be established to pin the enemy down. The light mechanized flame thrower (with infantry support) would then move out rapidly and flush the enemy out with flame.

In the attack, the light mechanized flame thrower could follow closely behind the assault infantry. When resistance was met, which offered a suitable target, the flame throwers could move forward quickly and engage the enemy. Flame is effective against enemy personnel in slit trenches as well as in pillboxes. By alternating the fire of the throwers the target could be kept consistently under fire for a considerable period of time. Soldiers in trenches, pillboxes, weapon emplacements, massed enemy groups, unseen enemy in woods or in jungle, and enemy located in the cellars or other levels of buildings are good targets for the flame thrower. Tanks and vehicles are additional targets. Portable flame throwers should be immediately available for difficult terrain or a specialized target. If carried on the light mechanized flame thrower closely behind the infantry, they would be available when needed. Trained crews from these light mechanized flame throwers could operate the portable jobs. At the same time the heavy mechanized flame thrower could be moving with the flanking forces to strike the enemy reserves, supply points, or command posts.

The aggressive use of flame would greatly assist the infantry in obtaining its objective and to reduce the number of casualties in the assault.

IN DEFENSE, the mechanized flame thrower could be dug in on the reverse slope of the defensive position, and the hose extension run over the hill into the critical approaches. Portable flame throwers could also be massed before critical approaches which are inaccessible to the mechanized flame thrower. Here again close teamwork and understanding of the

use of flame is most important. Flame throwers must be supported by infantry fires. Care must be taken so as not to fire too early against enemy scouting parties, but to reserve the flame for the main effort of the enemy. The enemy should be allowed to approach as closely as possible and then trapped between the near and far flame with the mass of flame being applied to the main body of troops in the middle area.

In the pursuit, mechanized flame could be used to good advantage to flush out the enemy before he can reorganize or dig in new defenses.

Patrols in force would find flame throwers helpful in covering men withdrawing after contact has been made.

Rear-guard units would find the mechanized type of flame thrower valuable.

IN ALL action, it must be emphasized that aggressive action by infantry must follow the use of flame. Otherwise the ground cannot be held.

As with all other weapons, flame thrower tactics must be adapted to the situation as it exists. However, there are certain basic principles that apply to the flame thrower as to any other weapons. Unfortunately, little tactical doctrine on the use of flame exists in our service. The commander who properly utilizes flame will certainly include the following:

- (1) Reconnaissance.
- (2) Careful and continual planning.
- (3) Isolation of the objectives.
- (4) Adequate fire support from other weapons.
- (5) The use of sufficient flame (mass).
- (6) Coordination with supporting infantry.
- (7) Cut-off fires.
- (8) Rallying points for reorganization and refueling.

A PROPERLY organized and well-trained flame team has faith in its weapon and understands its part in the combined arms team. It uses flame to strike terror in the heart of the enemy soldier. Properly used it becomes a psychological problem to the enemy. Flame is a potent friend and ally to the combat infantry soldier.

FOOL 'EM

A. T. Hadley

*Deception won't win a battle
by itself but its use by units,
both small and large, can help*

CAPTAIN A. T. HADLEY, ARMOR-USAR (Honorary) covers the Pentagon for *Newsweek* magazine. He enlisted in the Army in 1942, attended the Tank Destroyer OCS and served overseas in psychological warfare, winning the Silver Star while attached to the 2d Armored Division. Leaving the Army after the war he attended Yale University where he pursued his interest in psychological warfare.

DECEPTION is an ancient and basic principle of warfare. Yet in battle the American Army seldom tries to fool the enemy. Perhaps this is because good deception requires better intelligence than we have sometimes had. Perhaps it springs from our emphasis on the material rather than the human factors of war. "Find them; Fix them; Fight them; Finish them"; is our battle motto. Yet some thought should be given to the present motto of the 3d Cavalry: "Find them; Fix them; Fool them; Finish them."

The purpose of this article is to take a brief look at the art of fooling the enemy. Two factors make deception more important than ever before. The first of these is the atomic weapon. Because atomic weapons, if delivered effectively, can neutralize concentrations of troops, supplies, or industry, it is essential that we confuse the enemy about the exact locations of such concentrations. Second, the great manpower of the Soviets makes it important that we force them to spread their forces thin by deceiving them with a series of feints.

Fooling the enemy requires some prior planning to be successful. Fooling the enemy, as it attacks primarily his mind, would seem to lie in the province of psychological warfare. However, our psychological warfare

people seem to devote themselves almost exclusively to propaganda. Thus the field of deception is sometimes neglected.

What was probably the most effective piece of deception in World War II was British in origin. This was the bogus army complete with dummy vehicles and radio net and commanded by General Lesley J. McNair that kept the German 15th Army pinned down in the Pas de Calais area following the Normandy invasion.

On the battlefield itself little more than a start was made in the development of deception methods. One of the simplest of these was to get a tank equipped with a loudspeaker off on the flanks of an enemy position. The microphone would be placed over the tank engine to make a lot of noise. Then the enemy would be informed over the loudspeaker that they were surrounded by a strong armored task force. Another device that once was used with excellent results by the 1st Airborne Commando Brigade was to let off a lot of smoke pots while ringing a German gas alarm over a loud speaker. The German soldier was no better at keeping his gas mask handy than the American. One could observe, until the smoke obscured it, confusion spreading as men fought over the available masks and rushed



to hunt up others. At about that time a heavy TOT was laid on the area.

WITH a little imagination the enemy can be fooled with practically any materials that are at hand. At one time there was an oversupply of pyrotechnic devices in the Ninth Army's supply dumps. These were taken to the front one night and the enemy was treated to a fascinating display of fireworks. When it was judged that every German would be out of his hole and bunker for a better view, a heavy artillery concentration was laid on them.

The RAF once dropped a luminously painted, helium-filled soccer ball on the runway of a large German airfield. By the time the ball had stopped bouncing practically every scientist in Germany had been pulled off his job and had been put to work analyzing the ball, its contents, and the possible reasons why it had been dropped. A cheap way of tying up scientific brains.

On the other side of the fence: Korea veterans have been reported as saying that they felt real panic the first few times they heard the bugles of the Chinese Reds. In World War II in the Voronezh offensive of late '43 the Russians used deception to secure tactical surprise. Discovering that German agents were on to their system of bringing up replacements they kept their old system going at a slow rate while secretly moving up replacements by other methods. It gave them complete tactical surprise at the start of their attack.

Consider the problem of establishing an airhead in a future war. Not only should the size and location of the true airhead be concealed but great pains should be taken to convince the enemy that it is actually located some place else. It is now pretty conclusively proven that details of the Arnhem airborne operation were betrayed to the Germans by quislings in the Dutch underground. In any future airborne operations allied agents should deliberately plant false information about an airhead's location.

The construction of dummy airheads should not be too difficult. Planes on returning from the actual airhead, or before reaching it, could drop large numbers of dummy parachutes. These could easily be made out of something non-critical like

paper. Along with the dummy parachutes, radio sets that would continually broadcast military messages would be dropped; also machines built to spray out small-arms fire at certain intervals before blowing themselves up. It would be a brave enemy commander indeed who would commit all his forces against the genuine airhead when he was told that 300 miles away over 20,000 parachutes had been dropped and a small-arms battle was building up with rising intensity.

AT the risk of getting into a realm that some may claim is nothing but amazing science fiction, it might be possible to have a large pinkish blue cloud appear over the fake airhead. This cloud and certain peculiar electric flashes below it might well lead the enemy commander to the conclusion that the US was setting up in the faked airhead facilities for the employment of the new radioactive weapons about which there had been some speculation in his most secret intelligence reports. Such deception should be feasible if fake reports were planted beforehand. Suppose Hitler had had the forethought to erect dummy V-1 launching ramps along the Brittany coast in addition to the genuine ones in the Pas de Calais area, how much time and bomb tonnage would we have wasted bombing the dummy installations?

The process of fooling the enemy would go on from the genuine airhead. Its purpose would be to create a belt of confusion around the airhead that would break the shock of the enemy's advance before he encountered the main line of physical defenses. One of the first and simplest things to be done would be to have teams of rangers on the outskirts of the airhead change around all the road signs and mile stones. Nothing is more confusing to a man moving in a hurry over unfamiliar ground than to have the map, if he has one, tell him to go one way and the sign another.

Helicopter-mounted, high-fidelity loudspeakers would range around the perimeter of the airhead broadcasting battle noises. These units would also work their way into enemy rear areas where they could issue confusing orders to the enemy troops. Posters supposedly written by the enemy would be placed where he could see them as he advanced. Such a poster might

warn soldiers against moving into radioactive areas. This would give the enemy a little bit more to worry about, and worry decreases the ability of the soldier to fight. A simple slogan like: "Remember, though not all American red flares are radioactive, some of them are," contains no lies. But it will cause an enemy soldier to hesitate a bit each time a red flare goes up. Imagine what would happen if after reading a poster warning it to beware of radioactivity, a battalion found all roads in the vicinity painted with a strange blue-colored, luminous substance that stuck to shoes and vehicles. They might well be delayed by such a trick longer than a genuine roadblock; and it takes far less time to paint a road than to establish a roadblock.

Naturally the enemy's communications would be tied up by jamming his radios and cutting his phone wires. If his code had been broken his own means of communication should be used to issue him bogus orders. Special units might well be formed equipped with enemy weapons possessing a distinctive sound, such as the German "burp" gun. These units would take advancing enemy columns under fire at the extreme edges of the airhead. The belief that one is under fire from friendly forces will often delay an advance more than actual resistance. It also does much to lower morale. At the same time the enemy was attacked by what he believed were his own troops it might be possible to have him bombed by planes bearing his markings just for good measure.

Should large bodies of troops be so overcome by the deceptions practiced against them that they wish to surrender, the procedures to enable them to do so should be well rehearsed. Colonel S. L. A. Marshall has reported that the delay in halting friendly fires often frustrated Red surrender overtures in Korea. By the use of loudspeakers it is possible to control both the surrendering force's and ones own fires so that surrenders can be effected in a matter of minutes. Techniques for accomplishing this had been perfected by the end of World War II. If two friendly soldiers dressed in enemy uniforms stand up and openly surrender at the end of an appeal, these two like Judas goats will often lead the genuine enemy in. Deception, while it will not win a battle, can aid its successful conclusion on every level.



The AAA 90 in a Surface Mission

Major Lucius F. Wright, Jr.

*The triple-A 90 has punch, range and mobility.
This makes it a good medium field artillery
piece if its other limitations are understood*

THE use of an anti-aircraft artillery group as division artillery for a ROK division in Korea last year awakened interest in the use of medium anti-aircraft weapons as field artillery when there is no hostile air threat. Aside from the obvious advantage of having any additional field artillery firepower possible, the use of AA as field artillery has several important features with which all artillerymen should be familiar.

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The capabilities of the 90mm gun are in general, all-around traverse, high muzzle velocity, long range, rapid rate of fire, and cross-country mobility comparable to that of the 155mm gun. The traverse and range are highly desirable from the field artillery point of view, as is the mobility. However, the muzzle velocity and rate of fire must be considered in more detail.

The muzzle velocity of the 90mm gun presents a decided problem in choosing position areas. When used in the surface role, the 90 is considered to be medium artillery, and as such requires ten yards of flash-defilade for protection against hostile

observation. To illustrate the magnitude of this problem, assume the situation wherein the minimum elevation is one hundred mils; an elevation of one hundred mils for the 90-mm gun gives a range of approximately 7,500 yards. This will require careful consideration in choosing position areas when there is a requirement for fire at relatively short ranges.

The muzzle velocity further complicates the use of the weapon because in most terrain there will be a further requirement for careful study of the impact end of the trajectory to ascertain whether or not friendly troops will be endangered by the relatively shallow slope of fall of the projectile.

This will be necessary with all fuzes, not simply with the VT fuze as is normal for howitzers.

Another problem caused by the high muzzle velocity and the light shell of the 90mm gun is that of range dispersion. At middle ranges, the range probable error of the 90 is roughly forty yards, and at very long ranges this error exceeds a hundred yards. This will present a very definite limitation for targets requiring accuracy of fire at longer ranges.

The rate of fire, though rapid, will necessarily be slower in the surface mission than when in the AA role because of the much larger number of rounds fired during the average mission. Further, it can be expected that in the surface role, AA units will leave their electronic equipment somewhere in the rear and use the transportation for hauling ammunition. They may, however, take generators along to enable them to use automatic fire. If generators are not available, manual ramming is necessary and a decreased rate of fire necessarily follows. In general, the rate of fire for very short periods will be much higher than that of the 105mm howitzer, but for prolonged firing the 90mm gun rate will approximate that of the J05.

The T/O&Es of 90mm battalions are built for their primary mission of firing antiaircraft missions and complications arise when they fire FA

missions. For example, there is only one man in the battalion, the master gunner, who can be expected to know survey, at least initially. These battalions must be provided with additional survey personnel from the field artillery or necessary surveys must be done for them by the field artillery.

Although AA battalions are equipped and trained to operate their own fire direction centers, there is talk of sending a computer to the field artillery battalion FDC when only one battery is reinforcing a field artillery battalion. On the surface, this appears to be a good idea. However there are differences in technique which mitigate against this. For example, the 90mm gun gets direction from an azimuth dial, so when reading azimuths on a range deflection fan in the fire direction center, you read in the opposite direction including within 100-mil increments from the direction read when using deflections. Even in the case where the azimuth and the deflection are the same at the base point, this will cause confusion or require the use of two scales on the same fan in the field artillery battalion FDC.

Communications present another problem. The 90mm battalion is very weak in radios usable for field artillery firing. Their wire is sufficient in any situation which permits the use of wire, and wire should be con-

sidered the primary means of communication.

All of these limitations are important considerations when preparing to use AA in the surface mission, but none is so great as to do more than require a little more careful planning and thought. I do not intend to imply that the limitations of AA weapons and organization are so great as to cause any serious trouble. I do want to point out some of the considerations that have to go into its employment in a surface mission.

WHAT are the possible missions for AA battalions in a surface role? Here are two possibilities: complete use as field artillery where an entire battalion and perhaps an entire group may be used for an indefinite period; and second, the use of one or more batteries, sited for antiaircraft fire in an alternate role reinforcing a field artillery unit.

Within the limitations I've mentioned, the use of a battalion or group entirely in the field artillery role presents no unusual problems. Any tactical mission may be assigned such a unit, though direct support or reinforcing a direct support battalion would be undesirable. The alternate reinforcing mission, however, does present a few problems. The primary consideration in this type of mission is that the batteries are sited primarily for AA defense, and their use as field artillery must necessarily be incidental. For this reason no specific time schedules can be planned. As mentioned previously the dispersion of the 90mm gun in surface firing is quite large. For this reason, and because of the relatively light shell, it is generally felt that it can best be used for harassing and interdiction fires and some neutralization fires against personnel who have little protection.

THE 90mm gun may be profitably employed in the surface role. It has a long range, all-around traverse, and good mobility for such use. Its limitations are not unusual to gun type weapons. The battalion and battery may be used without change in organization, although field artillery units must expect to supply survey and communications assistance.

Battery C, 68th AAA Gun Battalion, put the first 90s of the Korean campaign into action near Taegu on 16 September 1950



... Injustice Burns Deep

THE YOUNG MAN stood rigid before me, his face white and tense, a smouldering resentment burning in the angry brown eyes that looked in a fixed stare somewhere above and beyond my left shoulder. He was a prisoner in the guardhouse, and I was his regimental commander down to visit him.

It was hard to break through the peculiar shell that so many prisoners build around themselves—a combination of defiance and a to-hell-with-it, nothing-matters-to-me attitude. But charges for his third offense (failing to obey) in four months—after nearly five years as a good soldier—were a clear indication that one of the oldest, most widespread causes for a good soldier gone wrong was once again wrecking a fine young military man's career . . . if not his life.

The cause?

This man felt that he had been done an injustice.

Not a viciously intended injustice, but one against which he had protested, first as a good soldier—then, when he found indifference to his justified requests . . . well, one word led to another.

Of course you simply cannot condone a man's failure to carry out orders—or deliberate neglect of duty.

But neither can you condone a man's failure to consider the reasonable rights of another—the neglect of the duty to prevent an injustice.

Injustice burns deep into a man's soul—*especially if it limits his opportunity for advancement.*

We lay great stress on military legal justice, the kind that is imposed on very few, and then in the form of punishment for some offense. But the justice I am talking about—the common ordinary justice of one man to another—affects every single man in the military service. It deserves far more attention than it has been given—because a sense of injustice, the bitter gall that eats into the heart of a man, has ruined a great many fine soldiers.

What was wrong with this young, tense, bitter soldier?

He had been a cook in his company for nearly four years and for more than two years he had asked for a change of assignment. The mess steward was a permanent fixture, so there was no way upward except by reassignment within the company or transfer out of it.

Several first sergeants and several company commanders had given him the explanation that he was needed as a cook and would have to wait until a replacement could be trained. Like a good soldier he had taken this in good faith for nearly two years. But he finally realized he was getting a cumulative run-around.

So the acid began to eat, to burn into deep-felt anger that in two years time a good soldier could not be replaced as a cook . . . and he was on a six-year hitch.

So he ended up in the guardhouse.

It's perfectly true—he was the principal in the offenses that landed him there. But all the first sergeants and commanders who could not find a replacement for him in two whole years were accessories before the fact.

They had done him an injustice.

This is only one case. Injustices can be done in thousands of ways to men of all ranks from privates to generals. The injustice that seems to eat the deepest into the heart of an American soldier (or officer) is the injustice that closes the door of opportunity, prevents his promotion through no fault of his own. All too often, because of the selfishness or plain indifference of the man above him.

Then you see—if you have the eyes to see it—a fine military man gradually turning sour as he begins to ask himself, "Am I a good soldier—or just a sucker?"

Here are some of the ways injustice can be done:

Keeping a man driving a truck forever against his will.

Making a man club officer time after time, "because he has had experience at it."

Refusing a stenographer, year after year, the chance to change duties.

Keeping an officer on a back-breaking staff job for years, denying him well-earned command duty.

Making a potentially good soldier a fireman—and then forgetting about him.

And there are countless others . . .

Then there are the problems of justice in personal matters. The kinds and varieties of personal problems are many and some of them are insoluble, especially marital tragedies among young soldiers. In these cases the good of the service and the good of the man are often directly opposed.

But whether the problems are personal or professional, no man has the right to do what he wants when he wants to. That much is sure. But every man should know without any doubt that his problem is *sincerely considered*—especially in relation to the fact each year has 365 days in it, and that an individual may have to live with his unsolved problem every one of those 365 days year after year.

If you are in a position of authority and you can not grant every request, you can prevent almost every case where injustice burns deep.

What did I do about my own soldier whose sense of injustice got him into the guard-house with a case pending for "failing to obey"?

He was tried and sentenced again. Then both sentences were suspended. He was transferred and given a line assignment. And yes, he made good.

I wish that I could find the words to close this little discussion in a way that would make every man who reads it take it to heart and resolve never to do a good soldier an injustice. If I could do that, thousands of military men would thank me for saving them the bitter disillusionment of thoughtless or selfish injustice.

Such immortal words escape me, but I hope you will remember this one thought:

One of the gravest responsibilities of authority is to maintain a constant vigilance to insure that your injustices are reduced to the irreducible minimum.

COLONEL CLEARVIEW





THE AIRBORNE SOLDIER

Lieutenant Colonel Spurgeon H. Neel, Jr.

His aggressiveness is the pay-off in battle and the origin of most of his troubles when in barracks. Properly tempered by good leadership he is the finest of tools

THE airborne soldier is the most formidable weapon of airborne warfare. It is he, rather than his airplane,

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parachute, organization or equipment, that distinguishes airborne from nonairborne outfits. He is the instrument who determines the final success of any airborne assault. Like his weapons and equipment, he functions best when completely understood and maintained in constant combat readiness. He is most difficult to replace. It takes nine months to make him, at least eighteen years to mature him, and five months to properly train him for airborne duty. He is a scarce commodity for which no

ersatz can be substituted.

Who is this airborne soldier? How is he different from other fighting men? What are his common problems? How may they be prevented and corrected?

Actually, there is no typical or average parachutist, but certain personality characteristics are so common to all airborne soldiers that it ought to be helpful if we discuss and evaluate them. Such information should provide commanders with the technical information necessary to improve the

effectiveness of their soldiers, and prevent some of the more common personality difficulties.

Perhaps the best way to understand the "typical" parachutist is to study his reactions to stress. During eight months (May through December 1950) I interviewed and examined 582 airborne soldiers referred to the Mental Hygiene Clinic of the 82d Airborne Division for various personal and disciplinary problems. I make no claim to being a highly trained psychiatrist, but I am interested in the maintenance of the physical and mental condition of parachutists, as well as unit morale and *esprit de corps*. The opinions which follow reflect this clinical experience, plus the fact that I am a fully qualified active parachutist myself. There is truth to the saying that "It takes one to know one."

THE prime specification of AR 40-100, which lists the physical requirements for airborne duty, is that the applicant be "alert, active, supple, with firm muscles and sound limbs; capable of development into an aggressive individual fighter with great endurance." This requirement connotes mental as well as physical alertness, activity, soundness and aggressiveness. Before attempting to evaluate specific personal and disciplinary difficulties encountered among parachutists, it might be well to discuss their general psychological characteristics.

All parachutists are volunteers. They select the airborne and the airborne selects them. This mutual selection process is the basis for all future development and duty as parachutists. In peacetime the soldier first volunteers for the Army. After basic training, and perhaps some duty with a nonairborne unit, he further volunteers for airborne duty. After this second selection, he is subjected to a rigid physical examination and processed through a thorough course at the Airborne School at Fort Benning. Officers and men, alike, attend the same training with no favoritism or variation in requirements. This mutual beginning provides an officer-soldier identification which continues throughout the trooper's airborne career, and forms the basis for all future command relationships.

Airborne volunteers come from all walks of life and every state in the

Union. Every race and religious creed is represented, and the educational spectrum extends from men who are barely able to meet the educational requirements for enlistment to men with postgraduate degrees. One cannot say that any special group of men make the best parachutists.

THERE are many reasons why men volunteer for airborne service and an evaluation of them gives us a valid insight into the type and degree of motivation. An understanding of motivation further predicts the basic personality of the airborne soldier, what he is seeking in life, and the personality problems which he may be expected to encounter. For ease in discussion, motivations for airborne service may be divided into two major groups:

The larger group is aggressive; men belonging to it are seeking advancement and a place in life. Airborne duty offers these men an opportunity to affiliate with a select all-volunteer group with a proud heritage and a promising future.

The extra pay and distinctive uniform of the airborne soldier are a further inducement but these factors must be kept in their proper perspective along with such less tangible factors as individual morale and unit *esprit*. Men from the aggressive group make excellent airborne soldiers and they are afforded, in turn, a socially acceptable means of expressing their innate aggressiveness and desire for recognition as they search for homeostasis in this humdrum world. Personality and disciplinary problems are rare in this group.

The much smaller group of airborne volunteers are "escapists." They enlist in an effort to escape some of the unpleasant responsibilities of civil life, only to learn that they will have the same responsibilities in the Army, but under an even more rigid social system. They become attracted to airborne duty by the "glamor" and extra pay. A surprising number volunteer with such unwholesome motivations and some eventually qualify as parachutists, only to find that their responsibilities are multiplied, and that much more is expected of them. To these men airborne represents the "Foreign Legion" idea, and once they join, no further escape seems possible.

An interesting corollary to this con-

cept is the fact that, recently, in answer to a call for Ranger volunteers, a relatively high percentage of these maladjusted men sought even further escape by volunteering for these crack fighting units. A real effort was made to screen out such men and hold them in their parent units where they could be rehabilitated and made into effective soldiers. A particularly malignant subdivision of the group of "escapists" are those men who deliberately take advantage of the reassignment priority accorded airborne volunteers to escape some particularly unpleasant military situation. These men are poor airborne soldiers and are responsible for the majority of the disciplinary problems which require an inordinate amount of command and medical effort. Thus, a very small minority of airborne soldiers are responsible for the majority of the problems confronting airborne commanders.

THE airborne soldier is young. The average age of the men in the 82d Airborne Division during World War II was twenty-two plus years. Presently it is twenty-three years. The youth of the average parachutist accurately predicts his marital status and social interests. More important, it indicates his reaction to authority, his need for strong (paternal) leadership, and the feelings which he has for his comrades (Brothers in Arms) and his commander (The Old Man). To say that the average parachutist is immature is wrong. He is a young man, but his emotional and mental maturity is equal to his age. The average parachutist is impressionable and visionary, but not a dreamer living in a world of fantasy. Parachuting is a definite mental and physical reality. The way he adjusts to the airborne way of life depends largely on his youthful vision as he accepts the ever changing personal responsibilities that come in training and combat. His flexibility is of extreme importance. Parachuting is a young man's game. The "young in heart" make the best airborne soldiers.

The airborne soldier is aggressive, and it is the degree of this characteristic which primarily distinguishes him. Aggressiveness is a double-edged sword. While accounting for the high effectiveness of the paratrooper in battle, it is also responsible for many of his personal and disciplinary prob-

lems during training. Aggressiveness is not the same as anti-sociality. The former is a healthy force of extreme value to the individual and the Army, while the latter is a lawless, destructive, perverted force acting to the detriment of the man and his community. Aggressiveness is healthy so long as it is directed toward the enemy or other challenging situation. It is undesirable when it is directed toward one's own unit, and pathological when directed against oneself. The "preventive maintenance" of the airborne soldier consists, largely, of providing him with socially acceptable, profitable targets for his native aggressiveness; be it an enemy, training objectives, or athletics. The power is there, and it must be dissipated or sublimated.

The airborne soldier is proud. He has been through a thorough screening process and has proven himself. He glories in his own accomplishments and those of his predecessors. He has been selected for, and trained toward, perfectionism and expects it of others. He is intolerant toward all those who do not measure up to his expectations. His boots, wings and cap patch are to him symbols of his position in life, and he wears them as badges of honor. To him they are not exhibitionistic, but represent certain deep intangible feelings best expressed by boots, wings and cap patches.

The airborne soldier is clannish. He not only acclaims his airborne status to the world, but further proclaims his division and even the individual unit to which he belongs. The shoulder patch and wing background are but physical representations of these close identifications. This strong attachment between parachutists in smaller units is largely responsible for the proven effectiveness of small airborne units in isolated situations or independent operations. The mutual respect extended between airborne soldiers and their "own" officers stems from their common beginning in jump school and their close association since. The parachutist resists transfer even to another airborne unit; but, upon reassignment, quickly shifts his allegiance, and once again, belongs to the "best outfit in the Army." This close identification within the smaller units is not without its effect upon the parachutist in battle. If one or more of his fellows are lost, the intense emotion he feels toward

them will return to him as grief, often to a neurotic degree requiring medical attention.

THIS, psychologically, is the airborne soldier. He is young, aggressive, proud and clannish. These psychological attributes are the indispensable elements of military parachuting. While determining the combat effectiveness of airborne soldiers and the capabilities of their units, these same characteristics also render the parachutist more liable to certain personal and disciplinary difficulties in the training setting. In evaluating any individual his environment must be considered. During training, and more especially in combat, the parachutist is taught to respect force and despise weakness in any form. He is surrounded by others like himself, and commanded by officers possessing similar motivations and ideals. He participates in arduous training under starkly plain conditions and develops an appreciation for simple physical pleasures. He is "aided and abetted" by his comrades in that minor disciplinary infractions may not receive the same censure as might occur in other military organizations. He is an unusual individual engaged in an exacting and hazardous profession.

Whenever an individual (personality) encounters a situation a reaction occurs. The type and degree of the reaction depends upon both the basic personality and the nature and degree of the stress of the situation. In predicting the type of reaction that will occur, one must consider both factors—the personality and the stress.

There are two general personality types—the aggressive and the passive. The aggressive personality reacts to a situation by doing something about it. He makes sure that if something must yield, it will be the situation, not himself. This type wins battles (the ultimate mission of the Army) but, unfortunately, it plays havoc with peacetime character guidance statistics. The passive personality, conversely, meets each succeeding situation by yielding to it, and compensating within his own personality structure using various well established defense and conversion mechanisms. This latter type makes an ideal garrison soldier, but is of little value in combat. When one consid-

ers that the final mission of the Army is to close with and destroy the enemy, the relative value of these two personality-types is obvious.

Stresses encountered by soldiers are of many types and varying degrees. The stress incident to hazardous combat is much better understood than that associated with peacetime training. To the aggressive personality type, the stresses encountered in monotonous, repetitious training may be more difficult to resolve than those involving real hardship and physical danger. The numerous examples of national heroes who performed poorly under training stresses, then distinguished themselves in combat, are well known. Their exploits are recorded in their citations for the Medal of Honor and the Distinguished Service Cross.

THIS greatly simplified interrelationship between personality and stress is operative in every man as he meets the daily problems of life. These concepts are especially important, however, in combat, where the issues are more clearly drawn, the stresses are at a maximum, and decisive action is a prerequisite for survival and victory. The "normal" individual (a theoretical entity) is a fifty-fifty combination of both the aggressive and the passive personality types. Absolute "normalcy" is synonymous with "average" and "mediocrity." An airhead is no place for a mediocre soldier. Survival and victory in an airhead is possible only when each individual aggressively attacks the situation (the enemy) and overcomes it.

Paratroopers are selected and trained for aggressive ground combat. They must be accepted and appreciated for what they are. The parachutist is expected to react to the combat situation in a manner far different from other soldiers, yet many expect him to react to the training situation in an identical manner. It is just as much a fallacy to attempt to compare two unlike psychological entities, as two unlike physical entities. Unfortunately, personality cannot be turned on and off like a faucet. If airborne units are to live up to their traditional effectiveness in battle, parachutists must be selected and physically and mentally conditioned for ultimate combat operations. The personality type most valuable in combat does

not adapt easily to the peacetime training situation. The stresses involved are entirely different.

In interviewing and examining the 582 soldiers referred to the 82d Division's Mental Hygiene Clinic for various personal and disciplinary problems, I was interested to note the relative disproportion between those exhibiting disciplinary problems and those presenting neurotic symptoms. The airborne soldier reacts to maladjustment by aggressively "lashing out" at the situation, rather than suffering the neurotic or psychotic personality disorders more common in the passive personality-type. The stress of jumping was only rarely the cause of difficulty, and in almost every such case resulted in passive neurotic symptoms rather than aggressive misbehavior.

The only men who universally profited from rehabilitation were those with essentially normal personalities who had been exposed to special or unusual stresses. Every individual is subject to these maladjustments if affected by sufficient stress. The more common stresses precipitating acute situational maladjustment are:

- (1) Domestic difficulties, which may or may not be related to airborne duty.
- (2) Malassignment; either the wrong job or the right job in the wrong unit. Included in this category are those persons promoted or assigned to positions for which they do not possess sufficient mental capacity or experience.
- (3) Personality conflicts between the individual and his comrades or his leader based on prejudices or personal reasons.
- (4) Excessive demands; either peacetime work, or combat strain.

THE three common disciplinary problems of interest to airborne commanders are absence without leave, venereal disease and overt belligerency.

Absence without leave (AWOL) among parachutists is not ordinarily a passive endeavor to evade hazardous or unpleasant duty. It is more frequently an aggressive "lashing out" at a disinteresting and boring situation. During combat in World War II, the principal AWOL problem involving parachutists was encountered in base hospitals. Paratroopers recovering from combat wounds often went AWOL to return to their units

at the front. More recently, a battalion of the 82d Airborne Division was alerted for an unannounced mission. Not one man went AWOL after the alert, but five of the eight men already AWOL returned to duty saying they had heard that the battalion might be going overseas. This type of AWOL, though prejudicial to good military order, is best appreciated in the light of the type of men who comprise airborne units.

Venereal disease is a young man's nemesis and a statistical problem among airborne units. It may be considered as the "aggressive disease," in that its recipients, instead of avoiding it, actively pursue, beg for and even pay for it. Considering that airborne units are composed of aggressive, young, single men, its problem can be appreciated. Deplorable as it may be, it is but another outlet for unsatisfied aggressive tendencies.

MISCONDUCT, often including fights and other disciplinary difficulties occurring in civilian communities, is likewise encountered and undesirable. Such behavior, despite all efforts to control it, reflects the aggressiveness, pride and clannishness of airborne soldiers. Sensing the relief from rigid garrison discipline, paratroopers are prone to "ventilate" by physically demonstrating their disdain for soldiers they consider inferior because they are not airborne. This sort of conduct is probably the most undesirable side effect of the selection and training necessary to execute an effective airborne fighting force.

What is the answer to these perplexing problems? Must the airborne be plagued forever with continuing disciplinary problems in order to maintain its combat readiness? Most of the disciplinary problems facing airborne commanders today can be reduced to the common denominator of leadership. Commanding airborne troops is not easy. It challenges the leadership of all who receive that honor. Despite the rigid discipline characterizing airborne units, paratroopers will not follow a weak, ineffective leader who has not proven himself. The airborne officer cannot depend upon his rank and position alone, but must "win" his command to him by demonstrated ability. The airborne soldier quickly sees through sham and

pretense, and demands perfectionism in his officers.

Paraphrasing the late General George S. Patton, Jr., "Leading an airborne unit is like eating spaghetti. You can't push it from the rear; you must pull it from the front." Just as the airborne officer leads his troops from the door of the aircraft, he must lead them through all training, and provide them with proper social and morale example. Whatever he is, they will be. The airborne officer, despite his own relative youth, must recognize and appreciate his "father" relationship with his men. He must be prepared to assume this role in a firm, fair, sincere, mature manner. He should maintain his own dignity, and insure that of each member of his command. Dignified human relationship is the keynote of airborne command. The airborne commander must never attempt to substitute coddling for discipline in an effort to secure favor, as such will be recognized quickly and categorized for the weakness that it is. Airborne soldiers abhor weakness and will not tolerate it in a leader.

Training must be progressive and imaginative. Commanders must appreciate and exploit the inherent aggressiveness and energy of their men. Off-duty recreation must be appropriate to the basic airborne personality. Athletics offer the most universally successful emotional outlet for paratroopers. Not only those actively participating in so-called "blood-sports" profit, but those rooting on the sidelines "ventilate" by identification with one or the other of the contestants or teams. Commanders should not merely send their men to wholesome recreational events, they should go themselves and set the example. The parachutist, young and impressionable, will follow his commander be it to battle, church, ball game, or less wholesome activities. The airborne commander has a tremendous responsibility.

The airborne soldier is a vital military commodity. He must be selected, trained, and continuously conditioned for battle. His inherent aggressiveness is the key to his combat effectiveness. This characteristic must not be subdued, but rather accepted and sublimated toward difficult training objectives and socially acceptable recreation. If it is done intelligently and understandingly battles will be won.



Armor Is a Team

Armor is more than just tanks. Armor is a powerful team of infantry-

armor-artillery-air with extraordinary mobility and great firepower

Colonel W. H. S. Wright

IN "Don't Jump to Tanks," in the COMBAT FORCES JOURNAL a few months ago Colonel William Kintner wrote that our great need is for a defensive weapons system to defeat armor. The weapons, he says, must be inexpensive and plentiful. Then, with the power to stop armor, we will have time to develop more powerful offensive weapons. He fears that we may conclude from Korea that armor is the solution to our ground combat problems.

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I strongly believe that Colonel Kintner's theory is dangerous and may destroy us if it gains wide acceptance.

No mature military man will quarrel with his argument that we should have only enough armor to produce a balanced team of infantry-artillery-armor-air. But when he alleges that the tank as an offensive weapon is inferior to modern antitank defenses he falls into error.

As long as we have tactical principles, strategic concepts, or even national policies based on "defense" or "containment" or "reaction to communist aggression," we hand the initiative to the enemy—which is precisely what he wants and works for.

Our enemy well knows that our genius for production, and the resources of ourselves and our allies, will defeat him once we take the offensive.

The apostles of defense in preparing a wake for armor forget that armor does not mean merely tanks, and that armor does not exist in and of itself. Properly employed armor is part of a highly integrated and balanced infantry-armor-artillery-air team, the ground elements of which must be under a single commander.

Colonel Kintner argues that lessons from Korea prove that men armed with the bazooka and other defensive weapons can run armor off the battlefield. The first successes of the North

Korean tank columns were due to lack of adequate antitank weapons in the hands of the South Koreans. Now, the struggle over Korea's weary hills is in many ways unique. The privileged enemy bases in the north, the primitive road net, the hill-and-rice-paddy patchwork terrain are conditions not likely to be met in many other places. So it is dangerous to draw universal conclusions from what has been and is happening in Korea. If we alter our organization and equipment to fit Korea, we might find ourselves handicapped in a European war.

It is incorrect to say that the North Korean tank successes were due to the fact that "none of armor's arch enemies were available to the defense." The South Koreans had bazookas, towed antitank guns, and an abundance of antitank mines and engineer units to plant them. There had been constant drill and field exercises in planting minefields and building road blocks, and in antitank fire. The simple fact is that the American-trained South Koreans were so overawed and paralyzed by the psychological impact and physical shock of an aggressive and imaginative armored attack that they forgot their lessons, abandoned their weapons, evacuated their road blocks, and sowed mines in such haste that they were easily detected by the enemy.

This happened everywhere enemy armored spearheads were employed. Some resolute bazooka teams and gun crews did stick with their weapons in the face of tank fire and destroyed T34 tanks. But the disorganization was so general that such courageous actions were not common.

It is also incorrect to assume, as Colonel Kintner has, that the North Korean tanks disappeared from the battlefield entirely as a result of defensive antitank weapons in the hands of UN troops. Such weapons took their toll. But our own M46 tank when committed, even though not always properly employed, stopped enemy armor with dramatic suddenness. Tank losses must be expected and replacement vehicles must flow to the front if armor is to remain effective. North Korean forces apparently received no replacements. This and the cutting of logistic support by the Air Force, contributed greatly to the demise of enemy armor in Korea.

Korean lessons should be given a hard second look. If any lessons can be drawn they include these:

Impassable tank terrain seldom stops a resourceful commander.

Bazookas and other antitank weapons cannot thwart a wily and resolute armored attack.

A mobile defense, employing armor in quick, tank-killing thrusts, is the most effective and inexpensive method of trading space for the time required to build up an offensive.

Firepower alone can never be the superior of fire power plus mobility.

Colonel Kintner's second argument is that after victories in Poland and France, German armor was finally defeated by Russian defensive weapons and tactics. Serious students of mobile warfare are in general agreement that the primary reason for the failure of German armor was improper employment dictated by the "intuitive genius" of Hitler. Instead of using armor to destroy Soviet military formations, it was used to engulf huge pieces of Soviet terrain. German armor outran its logistical support and floundered in the mud and snow, and became a prey to Soviet armor.

THE third argument goes like this: the tank is an ideal tool for an aggressor, since it is a weapon of attack. Wouldn't it therefore be better for the United States and her allies, since they will never be aggressors, to concentrate on a system of antitank weapons? Such weapons, with the latest shaped-charge ammunition, used at short range, would make it impossible for tanks "to forage alone where they cannot be protected by the cross-fire of their brother tanks."

Properly employed, tanks do not operate singly without protecting fires. They always operate as a team, with other tanks, and with infantry, artillery and air. One of the unfortunate lessons of Korea is that too many of our officers are not aware of this. The argument that because we are not aggressors we do not need strong formations of armor is palpably weak.

Armor will spearhead the attack and exploit every fleeting tactical advantage. Present antitank weapons are a formidable threat to armor. But mobile, hard-hitting tank formations are and have been able to outwit every purely defensive system. Korea has proved that even well trained men, with the best antitank weapons, find it all but impossible to stay in foxholes and fight it out against armor used intelligently and imaginatively.

The Soviets have manpower. We and our allies cannot hope to match them in sheer numbers of men under arms. Our advantage is our overwhelming material resources and ability to produce. Why should we forfeit this advantage? We will win by equipping American soldiers with armor so that one tank crew will be equal to twoscore enemy infantry. To go to the other pole, as Colonel Kintner does, is to turn our advantage into a disadvantage. To equip our troops with a system of antitank guns and rocket launchers such as the bazooka, and to resort to purely defensive tactics is tantamount to doubling our enemy's present ground forces.

The final argument is that since it would be futile and too expensive to match the 40,000-odd tanks of our enemy at the present time, we should therefore not build them now. We "must wait until our operations are more nearly ready to use them. Then they can be of the latest style, less vulnerable to the weapons that are lying in wait, and specifically designed for the locale where they are to be used." How long does it take to produce an approved tank design? A pilot model? How long to give the model engineering and service tests? What is the production lead time (time from model approval through industrial production until issue to troops) for a modern combat vehicle? How long for training crews and combat teams? Two years for all this would be phenomenal. Could antiarmor weapons delay an enemy, heavy in armor, for that long? Could we accept the losses such a war would entail?

Our present production schedules are producing a balanced family of tanks superior to anything in the world. They are already rolling off the assembly lines. We will need them very early in any war, just as we did in Korea. To wait and see what we need, see what our enemy does, is the epitome of defensive thinking. We simply cannot afford to wait once more to see what problems communist initiative brings us to solve.

Armor is not just simply "tanks." Armor is an integrated, balanced and powerful team of infantry-armor-artillery-air, capable of extraordinary mobility and great firepower. Armor is as essential to a mobile and elastic defense as it is to the rampaging tactics of the offense. The lessons of Korea disprove the theory of the preponderance of the antitank defense.

FORWARD OBSERVER IN KOREA

Lieutenant Lewis A. Pick, Jr.

***The FO in Korea must be resourceful and confident—
and able to put his training and education to full use***

KOREA is a land of rugged mountainous terrain. Weather in Korea is seldom favorable; rain, fog, and low-hanging clouds in summer and, of course, in winter snow and cold—bitter cold. All these conditions of terrain and weather hamper the operations of the forward observer in his efforts to support the infantry.

In order to perform his assigned mission, the artillery forward observer must be able to move, communicate, observe, and shoot. As a representative of his own battalion and of the division artillery, his mission and the capabilities of the weapons he directs are paramount. The forward observer is not only the eyes of the artillery but also, to an extent, the judge of where, when, and what type of fire should be employed. His target information and his fire requests—the nature and amounts of fire required—determine in large measure the final decisions which are made by the battalion S3.

The FO in Korea finds movement most difficult. There are periods of weeks during which he does not have access to his jeep and trailer. The road net is bad in many sectors. He must be able to transport everything he needs on the backs of his section. Radio, weapons, rations, bedding, entrenching tools, shelter, water, and an extra battery constitute a back-breaking load when climbing mountains. When contact is made, the artillery observer team must be ready to move quickly. The infantry does not relish waiting for artillery fire.

Communications

The problem of communication for the forward observers has been and always will be formidable. In Korea, due to terrain, weather, and signal equipment, the problem is tre-

mendous. In the attack the SCR-619A or SCR-610 radio is the most dependable method of communication. Wire is laid as soon as possible, but, due to weather, water-filled rice paddies, and vehicular traffic, wire communication is not too reliable. The SCR-610 has been replaced in most artillery units by the SCR-619 converted, or the SCR-619A. The SCR-619 is a good radio. Ranges up to ten miles can be attained. However, the power unit (the BA-70) is inadequate; its life is short. The SCR-619A complete with BA-70 and packboard totals over sixty pounds, and the weight slows down and hampers section operations.

In such mountainous terrain, a radio relay station is usually required to enable the observer to reach the battalion fire direction center. When the FO moves from one ridge to an-

other he frequently loses communication which is a definite handicap in a fluid situation. During rearward movements this lapse enables the enemy to occupy the abandoned positions, reorganize, and continue the attack. The battalion artillery liaison officer can remedy this by relaying for his forward observers, or by being in a position to handle the necessary fire missions himself. The battalion liaison section should always be ready to operate as a relay station when the observers are out of radio range.

Let us cite for illustration a reinforced platoon patrol to the Han River bank led by a company commander. The second objective was Hill 88 adjacent to the river. Enemy were known to be in the area. SCR-619A radio was the only means of communication. Due to range and terrain, radio contact with battalion relay was spotty and required many repetitions. With great difficulty 155 howitzers were registered on Hill 88 and on 202, the next objective. The infantry advanced to the foot of 88 without incident. The observer followed. As the infantry neared the top, the Chinese opened fire with automatic weapons, mortars, and small-arms fire. The patrol was pinned down and was being out-flanked on the right. The artillery forward observer was unable to help until his battalion liaison officer, who had moved an SCR-619A forward, answered the observer's call and relayed fire missions to the fire direction center. With two rounds every fifteen seconds, the patrol was able to withdraw, inflicting many casualties on the Chinese while suffering only four itself.

Observation

In Korea, there are fingers extending from every mountain which present many blind spots, and often hide whole valleys from sight. The clouds and fog often limit visibility to less than 600 yards, which when coupled with dense vegetation greatly hamper observation. It is sometimes necessary to select two or three observation points to adequately cover a company-size front. Maximum effective observation is usually 3,000 to 4,000 yards. In the defense, the BC scope will increase observation range to approximately 5,000 yards in good weather.

The enemy is well trained in the preparation of positions. Many



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DECEMBER, 1951

dummy emplacements are constructed to draw artillery and mortar fire. Knowledge of Chinese and North Korean uniforms, types of positions, and methods of camouflage are essential in distinguishing enemy lines. The enemy attacks ordinarily begin during darkness. This tactic limits detection to less than 400 yards. In observing the same terrain from day to day, the artillery forward observer takes special notice of small features. Trenches, houses, positions on hills, trees cut down in woods, piles of brick, and railroad ties and rails are watched. The Chinese invariably use materials from one section of their defense area to build up another section, hoping thereby to escape detection. In most instances enemy positions are on the top and the reverse slope of the ridges, and the Chinese clear excellent fields of fire in front of their defensive positions. However, almost all Korean hills have abandoned positions from earlier campaigns, and the FO must be certain that position is occupied before he shells it.

Shooting

The preliminary missions of an FO all lead to the final mission of delivering artillery fire upon the enemy forces in support of the infantry troops. There are two kinds of artillery fire used extensively in Korea. The first is in preparation for enemy attack and movement. This includes registration, defensive, and harassing and interdiction fires. The second is fire delivered upon targets of opportunity. There are many intricate points with which an FO must be thoroughly familiar in order to direct fire with accuracy and confidence. An artillery forward observer is almost useless, if he doesn't have confidence in himself and in the artillery battalions that deliver the fire. The observer must understand thoroughly the methods of operation in the FDC and in the firing batteries. He must know what to expect from his organization, and the time required to fulfill his fire missions. A good forward observer knows weapons capabilities, elementary ballistics, dispersion of pieces, and types of ammunition and their uses. He must be well versed in the procedure used in firing a mission, to insure that the FDC understands exactly what is required of it.

Due to the Korean terrain, the reading of maps and range estimation

become of vital importance to the observer. Some bridges, power lines, and train junctions may not be on the 1:50,000 map which is the scale most often available. Some maps are reprints from Japanese maps and are extremely hard to read.

Usually the observer is confronted with a hill problem. He is normally situated near the top of the highest mountain in his company sector. Out in front of him there are numerous small and large ridge lines. He is able to see clearly the ridge to his immediate front, but the remaining ridges are just a series of indistinct hill tops. This makes the actual pinpointing of coordinates with the ground features a major problem. The observer must thoroughly understand the advanced elements of map reading in order to obtain a fairly close first round. The guns don't lie. If the first round is over 600-800 yards from the target and a large shift doesn't bring the round anywhere near the target, the observer rechecks the azimuth and the coordinates—one or the other is usually wrong.

The first rounds of an adjustment are usually white phosphorus. Since the valleys are deep, it takes an appreciable time for the smoke to drift into sight. Therefore, the direction and velocity of wind must be considered. Sometimes it's difficult to tell from the smoke whether a round landed short or over a masked target.

WHEN a forward observer arrives at his OP for the night, he selects terrain features upon which to register defensive concentrations in front of his positions. To be effective, defensive fires must be close to the infantry positions. The infantry company commander is informed of the defensive fires and his suggestions as to location of other concentrations are requested. The forward observer always remains in close to the infantry commander. This insures maximum coordination and the quick exchange of information.

In the defense, the enemy's approach is usually confirmed when he gets to within 300 to 600 yards of our positions. Depending on type of fire, time required to obtain fire, and estimated size of the target, the observer must use his own judgment in bringing his fires close to the infantry lines. A sound knowledge of dispersion,

especially pertaining to high-angle fire is essential.

Since the infantry often occupies mountain positions where vehicular traffic is impossible, high-angle fire is used. With this type of fire the use of the VT fuze in fire for effect has become common. It is particularly effective against riflemen in the open or in trenches. The large dispersion of the 105 when firing high-angle allows excellent coverage of the razor-back ridges with the VT fuze. The converging of a sheaf to obtain hits with fuze quick on these ridges is ineffective with 105 howitzer types. The best method is to fire a one- or two-gun destruction mission. This will accomplish the most effective results with the least expenditure of ammunition. Shell WP and shell delay is excellent against rocky positions.

Since the Communist forces utilize the darkness to maneuver, illumination is often requested by the infantry. Illumination should be well forward of the friendly front lines to eliminate the disclosure of the main line of resistance. In adjustment of illumination, shifts should be 400 yards or greater to gain the best results. Wind direction and velocity affect greatly this type of shell. If positive enemy movement is detected, illumination should follow the fire for effect with high explosive. In this case adjustments should be avoided if possible.

The FO in Korea is often called upon to mark targets for air strikes with white phosphorus. The marking rounds should be as close as possible to the target. A good description of the target is essential since the tactical air controller is usually at regiment. Unless this is done the air strike may end up in the towns in the vicinity. At times, contact can be made with the flight leader over the infantry 300 radio. Such contact enables the observer to point out specific targets to the flight leader, and to receive in return important information of enemy dispositions.

With the methods used by American artillery units, the experienced forward observer is able to deliver effective fire against the enemy. But he must remain flexible and confident, adapting his fire to the prevailing situation. The infantry appreciates artillery which does the job, whether the mission is accomplished with one gun or three battalions.

THE MIDDLE EAST: Ferment and Defense

Captain John Gerrity

AT THE END of October, the idea that the nations of the Middle East might some day be joined with the West for common good, must have seemed most unlikely. To us who had watched from afar the disruptive forces at work in Iran and Egypt, the smolderings in Iraq, Israel and Sudan, for example, "peace in our times" and ultimate international harmony with those lands seemed a far-fetched thought.

Indeed, as matters worsened each day, many a thinking diplomat and military planner found more people saying that it would be better for the United States if we abandoned this fool's errand and devoted our energies to solidifying the gains made in western Europe through NATO, and in the Far East, through a revitalized island empire and a reviving Japan.

But, actually, such proposals were only superficial in appeal. As one member of the State Department's Policy Planning group said, "Such an abandonment could be no more thought of than the tearing up of the North Atlantic Pact the day after it was signed, or the junking of the Marshall Plan at the end of its first year."

The ultimate and inevitable role of the Middle East has its roots in the beginnings of the Cold War waged by the free nations. Since March 1947, when the President propounded the Truman Doctrine, the grand scheme for containing Communism has never been altered. Now, as then, the way has remained open for peoples who believe in national integrity, human



Carmack in THE CHRISTIAN SCIENCE MONITOR
"Have you seen a weather report lately?"

rights and personal freedoms to join hands to combat slavery. The Marshall Plan was mainly an amplification and instrument of the Truman Doctrine. And no nation, not even the Soviet or any of its satellites, was excluded from its benefits.

Similarly, every succeeding pact or agreement has been part of the main idea—defense against aggressors. Economic restorations and national well-being alone were not adequate safeguards against Soviet expansion. Hence new techniques came to life. The North Atlantic Treaty, the North Atlantic Treaty Organization, and the Mutual Defense Assistance Pact; and the guarantees of freedom and protection made to Japan at the treaty-signing last summer—all these came from the same mold.

Over and over again the Administration and the governments of friendly nations have harked on one word—defense. Never once has there been any shift from the original concept. Freedom-loving nations will have

peace, even if the price of peace is the military and economic strength to wage a war.

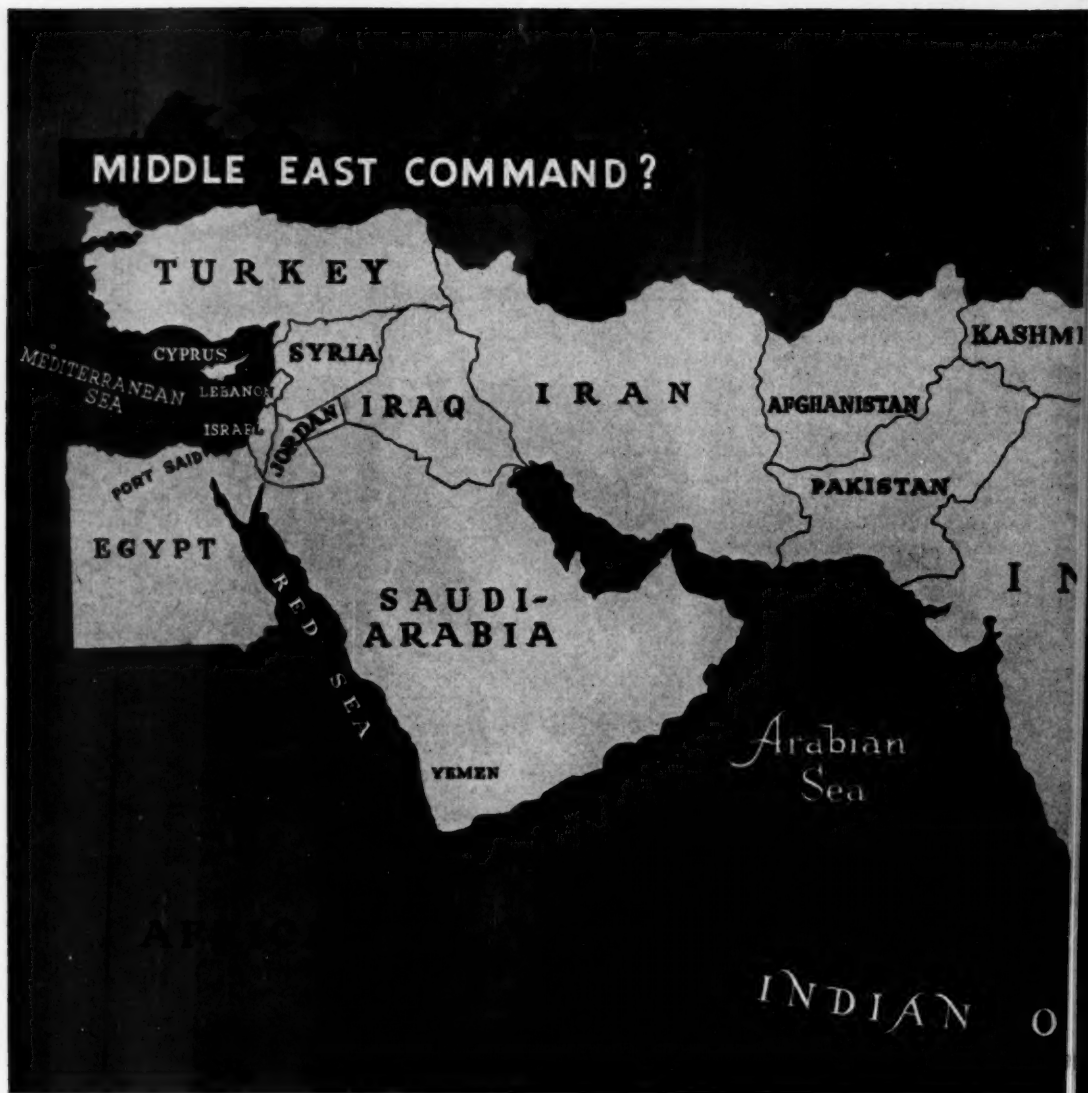
In the middle of 1950, opponents of the Administration's plans, who were nevertheless genuinely concerned for the nation's welfare, sought a reevaluation of our foreign policy. They were moved mainly by the fear that the United States would soon overextend itself. They argued that if the United States made the world strong, but bankrupted itself, the Soviet would win its greatest victory in a bloodless war. For with the United States a bankrupt, they reasoned wisely, no other nation could long survive.

And as an alternative to the "contain Russia everywhere" plan, it was proposed that two lines should be drawn, one in the West and one in the East, with notice served on the USSR, that if she crossed either of those lines, war would result.

BUT this proposal was defeated by two telling arguments. History had proved, in Germany, Poland, and most of eastern Europe, that drawing lines created vacuums, which the Soviet invariably filled. Also, in the beginning of any defense organization, the United States, obviously the richest partner, must necessarily be the biggest contributor. In time, as the defense plans proved out, and as other partners grew stronger, their contributions would grow bigger and ours smaller.

In the short span of a year the wisdom of these arguments has been manifest to nearly everyone. In China, for example, we have had crushing proof that full withdrawal of Western influence (military as well as economic) has left a vacuum wide open for Communist aggression to fill.

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Even admitting that the U. S., with its heavy commitments in Europe, could not sustain a sagging Nationalistic Chinese government, the fact remains that our withdrawal was a necessary precedent to the Reds' taking over.

Proof of the second argument is readily provided by a quick glance at the almost magical achievements of General Dwight D. Eisenhower in western Europe in the short space of nine months. What was once a heterogeneous collection of self-willed nations and military machines has, in that time, been welded into a unified

command, one in which selfish national interests have been effectively subordinated to the simple notion of "what is good for one must be good for all." Still a fledgling and still in need of great improvements as recent war games in France clearly showed, the defense of Europe is now no pipe dream, but a reality. Convinced now that they can, if given time, hold off any Soviet threat, the ten member-nations of NATO on the Continent are willingly agreeing to increase their contributions to their mutual good, both in men and armament.

So early this fall at Ottawa the members of NATO confidently undertook to enlarge their own organization and begin the establishment of a similar defense organization in the Middle East. This necessary filling of a geographic gap called for the admission of Greece and Turkey to NATO.

The conferees tackled the problem with good will. Time-worn arguments against the idea were patiently heard and then deliberately and systematically shattered. Fears expressed by Norway, Denmark and Great Britain, for instance, that the USSR might

they might be asked to cross the whole breadth of Europe to help the Turks, they were assured that this would not happen. There would be little sense in leaving the areas northwest of Russia undefended just to bolster the lines south of Russia. And when many of the nations voiced the worry that American aid would be insufficient to help supply the then existing member-nations, plus two more, realism again prevailed. It was recalled to the objectors' mind that since 1946, the United States had been giving aid to Greece and Turkey, first through direct grants and later through the Marshall Plan. What difference does it make, asked the United States, how and in what form we grant help, so long as we continue to grant it?

The upshot was the strengthening of NATO by including Greece and Turkey as full partners. Greece, with its ten battle-trained divisions, armed as well as any U. S. division was at the end of World War II, and its partially trained reserve of half a million men, was to come directly under General Eisenhower's command. Turkey, which proudly maintains that it is an eastern Europe nation, but whom geographers regard as a Middle East nation, was to serve a dual role.

As a full member of NATO, her job would be to protect General Eisenhower's southeastern flank. As the strongest military and economic nation in the Middle East, she would serve as the pivotal state around which the Middle East Command would be built. To obviate any possibility of conflicting commands, Turkey would by-pass the NATO field command and come directly under the Standing Group of NATO, made up of Generals Bradley of the United States, Ely of France, and Elliott of Great Britain.

HARDLY had the Ottawa conference adjourned and the fitting of gears for the Middle East Command begun, than trouble broke loose. Though at first centered in Iran in the dispute between the British and the Iranians over control of the oil industry, it was by no means localized there. The Iranian outbreak was, in fact, symptomatic of a widespread ill. Across the Moslem world—a world stretching from Morocco through the Middle East to Pakistan and Indo-

nesia—a surging, contagious nationalism had developed a pattern of violence. Leader after leader was cut down by assassins' bullets. Moderates, like Pakistan's Premier Liaquat Ali Khan, who believed that their nations' security depended upon co-operation with the West, fell by the wayside, victims of nationalist fanatics who think that any union with the West can only be an extension of long-hated imperialism.

Since the days of Disraeli, the man who had Queen Victoria crowned Empress of India and won the Suez Canal for her, a pent-up rebellion against British domination has been steadily gathering force. Today the people and rulers of the Middle East see a prime opportunity to strike for independence.

The Iranian oil dispute is typical. In Teheran and Abadan, before the United Nations Security Council, and in Washington, Iran's Premier Mossadeq has steadfastly maintained that the ousted British can never return, even if it means total economic collapse for Iran.

The first reaction to such a stand is to cry, "insanity." But full possession and nationalization of their oil industry is to the Iranians the symbolic end of their fight for freedom—not a fight for freedom as we would define it, a national emancipation like our Revolutionary War—but a fight against economic inequalities, which they have come to associate with the British. They used to feel the same way about Turkey when it ruled Persia.

The United States has not forsaken its conviction that a truce can be worked out. This might take the form of having some other nation, like the Netherlands, work the refineries as out-and-out employees. Or some profit-sharing scheme might be developed on a percentage basis. Or perhaps the British might be allowed to work as hirelings. But whatever it is, the Iranians would get a bigger share of the return, and the British will never return as cooperators in the industry.

In any event, it is most unlikely that the United States, or the other Western powers, for that matter, will let the Iranian dispute go unsettled, or worse, let it be settled by the USSR. For that would be nothing less than a surrender to Communism, and it might easily start a stampede of other Arab nations to Soviet protection.

regard Turkey's entry into NATO as a hostile act, and thus find an excuse for all-out war, were banished by two simple facts. If the USSR wanted to start a full-scale war by an attack on Turkey, she would do it whether Turkey was in NATO or not. And if such a war did ever come through Turkey, it would be better to have the friendly Turks as a buffer state than as an unsupported nation which might make the best possible deal for its own survival.

When Denmark and Norway feared that if the USSR attacked Turkey

Similarly, there can be no backing down without a solution in the Anglo-Egyptian dispute. Here the quarrel arose over a twenty-year Anglo-Egyptian treaty signed in 1936. By the treaty, Great Britain granted Egypt its sovereignty, but retained the right to defend the Suez Canal zone. Both nations also agreed to share the administration of Sudan, an area three and a half times as big as the state of Texas. Since the end of World War II, Egypt has been protesting the treaty, demanding that the British withdraw their troops and air forces from the canal zone and relinquish any claim to ruling Sudan.

In October, Egypt's Parliament voted an end to the treaty, just a few days before the United States, Britain, France and Turkey were to submit to Cairo a plan for setting up a Middle East Command. Besides killing off the treaty, the Egyptians also voted to reject the Command plan.

Though Britain's approach to

Much of the hope for a successful defense of the Middle East rests on the capable shoulders of the hardy Turkish infantryman.



Egypt's Camel Corps parades in the Sahara following maneuvers. This Corps, two thousand strong, patrols 3,000 miles of desert border.

Egypt on the Command question was heavy-handed, she said in effect "take it or leave it." But the British are on firmer ground in Egypt than in Iran. They did have a treaty they had lived up to. Rightfully, they could expect the same from Egypt.

This is the viewpoint the U. S. is taking in its support of the British. Both know that the lifeline of the Empire—the Canal—must be kept open, or else any hope of defending the Mediterranean Sea is baseless. With a poorly trained and equipped army and a very small navy, Egypt could not even offer respectable token resistance to advancing Soviets. And with its internal policies dominated by the Communist-influenced Wafd party, Egypt could easily fall prey to a coup of the Czechoslovakian type, by which the USSR could gain mastery of the Canal without firing a single shot—if the British and the United States did retreat from their stand.

THERE are still other tinder boxes in the Middle East. Iraq is already making threatening noises to the effect that she will end a treaty with Britain. Bad blood and hatred still flow freely between Israel and Egypt. Settlement of the Kashmir dispute between Pakistan and Nehru's India seems no nearer settlement than it was two years ago. In Afghanistan, tribesmen and peasants are in near revolt against absentee landlords. The same is true in Lebanon and Armenia.



Everywhere the poverty-ridden Moslem people are verging on violence. To restore and insure order will eventually require painstaking methods, such as the Point IV program, plus far-reaching internal social reforms. But right away, an international security structure for the Middle East must be built.

How, then, can order be brought out of all this trouble? How can you bring neighboring nations, cursed with ancient hatreds, under a common roof and expect them suddenly to forget their hatreds and become partners?

In brief, the plan is this, subject, of course, to changes which any possible new explosion could demand. The nucleus of the Command will be composed of the United States, France, Great Britain and Turkey. Far to the east, but not a functional part of the Middle East Command, Australia, New Zealand and Indonesia will be bound together to bring pressure from the other side. Then, one by one, each of the Middle East nations will be approached, on a political level, to enter the security structure. As each one joins, increasing efforts will be made to eliminate the reasons for quarrels between it and the next nation to be admitted. For example, should Israel be the first to sign

up whatever differences now exist between Israel and Turkey will be diplomatically ironed out. The same will hold between Turkey and Iraq.

As each new member begins to evidence the benefits derived from joint Anglo-Franco-American aid, objections raised by nonmember-states may be expected to fade rapidly. Moreover, the power-nations intend to emphasize the strong spiritual bonds that tie the Moslem states together. To most Moslems, whether Armenian, Pakistani or Afghan, the attractions of a sister Moslem state, such as Turkey, will be always far more enticing than the promise of the USSR, which even the most illiterate Arab knows are empty ones.

And lastly, it is possible that recalcitrant nations, such as Egypt promises to be, may be brought in whether they like it or not. One power-nation, not the United States, has seriously proposed that if reasonable efforts to negotiate fail, then sterner methods should be adopted. Though such a move would be the least satisfactory, it has been suggested that, if all else fails, frank "international" imperialism be employed. This the power-nations regard as a last resort, but if it becomes necessary, some form of temporary colonialism is far pref-

erable than permanent serfdom under Soviet rulers.

EVEN when Middle East Command is fully established, its chief virtues for many years will be political rather than military. But the achievements of Turkey, made under the direction of a 1,200-man military mission headed by Major General William H. Arnold, already form a sound basis for future hope.

In an amazing combination of American know-how and Turkish eagerness, forts and pillboxes guarding the Turkish straits (the Bosphorus and the Dardanelles) have been made into examples of military efficiency. The Turks, mostly men of the soil, have been miraculously changed into a nation of mechanics. Three years ago in Istanbul, a city of a million, only 2,000 men could drive an automobile. Today the figure is closer to 30,000. In 1948 the Turks had 21 patched-up planes of all types. Today they have more than 1,000 fighters and attack bombers. A fleet of row-boats and skiffs of three years ago has been transformed into a navy of more than 200 ships. In all, their army numbers close to two million men, well trained, well officered, and equipped almost as efficiently as that of any other Western nation except the United States.

Planes from Greece and Turkey today could bomb such targets as Sevastopol, the Soviet's Black Sea naval base, in an hour's run. And Baku, fifth largest city of the USSR and the center of its oil industry, is only a two-hour run away.

Next to Turkey, Israel shows the greatest promise. Iranian and Egyptian forces would require long training and virtually complete equipping. The same holds for the other Middle East nations, except Pakistan, which has many long-standing military traditions.

However, no one expects this big job to be done in a day—or a year. To pessimists who cry, "It's hopeless," the prime movers of the Middle East defense simply point to the first faltering steps of NATO. And they add that in the Middle East the desire to be free, to be rid of the threat of Communist dictatorship, is just as burning a passion as it is anywhere else in the world. If the will to be free does not weaken, the will to insure that freedom cannot weaken.

Cadets of an Iranian military school learn to be artilleryists by firing these pieces of ancient vintage at a camp near Teheran.



CEREBRATIONS

Our literate cocktail-hour tacticians stand to receive as much as \$10.00 for their contributions to this department. However, the price for those "dashed off" with scant consideration for the rules of composition and rhetoric will be much less. Hold them to four or five hundred words and type them double-spaced.

Fatigues and Boots

Taking it for granted that the Army gave considerable thought to the clothing allowance plan before putting it into effect, this might be classified as corrective criticism. But fatigues and combat boots presently charged to the individual personally should instead be issued to him as organizational clothing.

Anyone who has operated, or is operating with a line unit knows that these two items are the ones that wear out quicker than any others. Fatigues are ripped while men crawl under barbed wire, slide over stone walls, move through thick brush, and all the other phases of training a line soldier goes through. Boots wear out through the same treatment. It doesn't take very long for a pair of boots to change from an asset to a liability at that rate; anywhere from one strenuous month to two or three easy ones, and the total three months' clothing allowance only comes to about fifteen skins. Boots, bless 'em, are currently selling for \$14.95. You shoot your whole roll and turn up a pair of box-cars!

And how do you replace those fatigues that are hanging in shreds over your carcass? Where do you get the money? The answer to that is just dig down, buddy, way down! But what of the Ike jacket that's getting shiny on the elbows from hand and arm exercises, and the trousers shiny from sliding off too many stools? It takes six months' allowances to pay for an Ike jacket and three to get those trousers replaced—so we just have to dig again. And soon, by such digging, you have worn out the pockets of your other pair of trousers, so there you are with one more expenditure staring at you.

Buying dress uniforms is perfectly OK. It cuts down on the money the Army spends and makes a man realize that he has to care for his personal property. But fatigues and boots are two things that are worn out legitimately during the course of training

and, therefore, should be replaced at the government's expense.

SGT. FREDERICK W. DOLAN

Battalion CO, Mounted

Though we have accepted the principle that training, to be effective, must be supervised, yet the means to insure effective supervision are frequently lacking. Specifically, at the battalion level the commander is not provided with the proper facilities for carrying out the necessary command supervision.

A battalion under normal training conditions is dispersed over a wide area, particularly during the periods of tactical training. In the course of a morning's instruction in the field, a battalion commander will find it possible to inspect only a small portion of the training of his command. He must decide either to remain for the entire period with one element, a company for example, and observe its training carefully; or, in an attempt to visit all units, spend his time in transit with only a fleeting glimpse of each unit.

Generally speaking it is physically impossible to cover the battalion area by foot and devote sufficient attention to each organization. The use of a jeep overcomes the time-space obstacle only partly. If the terrain is suitable for tactical exercises it is difficult, if not impossible, for cross-country jeep movement. A combination of foot and jeep transport is inadequate.

The problem can be solved by mounting the battalion commander, and certain of his staff, on horses. A CO and staff suitably mounted could

cover the average battalion training area in the course of a morning without difficulty. All units could be visited and the necessary amount of time passed with each. On a horse, areas inaccessible to



a jeep, or requiring very slow movement, are rapidly traversed. The average horse can jump obstacles two feet high and can sustain for reasonable periods a twelve-mile-an-hour gallop over moderately rough terrain which would slow a jeep to minimum speed.

As a corollary, battalion commanders would undoubtedly be in a much better physical condition after several months of riding than they would be after a similar period of sitting in a jeep.

LT. COL. POLO

Out of the Blue

With the development of radar, rapid-fire antiaircraft guns and other defensive weapons, airborne operations will become increasingly difficult to carry out successfully. At the present pace of development of defensive weapons parachute missions may be ruled out as being too expensive in men and machines.

An alternate course is open, however, and it is one that will not be too costly.

Troop-carrying planes would approach the drop area at great altitude—possibly deep in the oxygen zone—to minimize interference by defending enemy planes and ground antiaircraft weapons. This high-altitude approach could be effectively defended by escorting fighter planes, thus permitting the troop-laden planes to hold tactically sound formations.

How could the soldiers get to the ground in any numbers if they arrive over the drop zone at great altitude? The solution is simple and, it would seem, more efficient than the customary drop from a low altitude.

The answer is the dependable automatic parachute opening device used by the Air Force. This gadget can be pre-set to open the 'chute automatically. The parachuting soldier may be injured or unconscious but the device, which operates by barometric pressure, would go into action and open the 'chute. The standard ripcord for manual operation would be retained for emergency use and as a morale factor.

The jumpers would dispense with static lines and, instead, would "free fall" to within a few hundred feet of the ground. With no planes visible overhead, defending troops would become aware of the attack only when they saw the parachutes blossom out overhead.

In training, confidence in the automatic device could be built up by setting its mechanism so that the 'chute would open at a height great enough to allow the jumper time to make use of his manual ripcord.

The free fall technique would naturally impose a great strain on the jumper's body, but this might be offset by decreasing the amount of equipment he would carry. Also the parachute harness should be redesigned. Jumpers might be equipped with lightweight plastic helmets. Equipment, stripped to a bare minimum, could be suspended from the 'chute risers and not from the man. The suspension could be designed so that upon opening, the dead weight inertia of the load could be further absorbed by a spring arrangement. The 'chute and not the man would take the impact.

Heavy equipment could also be dropped by the free fall method. Using current techniques whereby a pilot 'chute drags the heavy gear out of the plane, this 'chute would not be big enough to float the load but it would be sufficiently large and strong enough to allow the load to fall perpendicularly, eliminating any tendency to fall end-over-end thus running the risk of fouling the lowering parachutes. Here again, the automatic opening device would come into action at a pre-set height.

M/SGT. FRANK J. CLIFFORD

Watch That Lectern

A lectern is a leaning device with a wide base so it won't turn over. The base is connected with the upper part by a thin post around which the nervous officer or noncom instructor may wrap his right knee while keeping his left foot tremulously on the floor. The top piece of a lectern is a slanting platform for notes. The sides of the platform are usually worn slick by speakers' hands that have nowhere else to go.

A speaker cannot hide behind a lectern; he can be seen all the way down to his shoes. Any short instructor however, may have the impulse to hang his chin over the forward edge of his lectern like the cartoons painted on fences and latrine walls all over the world. Just two hands, two ears, two eyes, a nose and a talking mouth.

A tall man is different. He carefully puts his notes down, backs off two paces and declaims. When he forgets

what he meant to say next he bends over, focuses, refreshes his memory and straightens up again. Such bowing and retrieving may remind the audience of the mating dance of the wild birds, and usually is about as pertinent to the speech.

Some speakers merely use the lectern as a base of operations. These need both hands free to gesture widely—like a fisherman just back from vacation. All notes will be left on the stand, weighted down with a pen-knife. Having attended some county courthouse trial, where the prosecuting attorney tramped back and forth addressing the jury, these speakers adopt this technique. But they fail to spend half the preceding night in preparation—the real secret of a country lawyer's success.

So our man walks, back and forth, forth and back, seldom stopping to see what the effect is on his listeners. He visits the lectern at intervals for an obvious glance at his notes. He makes it clear, however, that most of what he says comes out of his fertile brain.

This type of instructor goes over big with himself. His audience doesn't mind much after they learn to focus on the lectern to avoid the neck-twisting feeling of watching a ping pong match.

A lectern is indispensable to a speaker who gestures with his heels. This type will begin a talk by gluing onto the lower corners of the lectern in a grasp guaranteed not to slip for half an hour. He will bend slightly forward with both feet firmly planted. When he gets a point that requires emphasis he will raise as high as he can on his tiptoes and holler.

This gives a recruit who may be trying to read his funnybook during the speech, the impression that he is hearing two men. One time he looks up and the man is short. On the next glance the man is tall.

To the listeners seated to one side of the speaker's platform the spectacle of the speaker's *derrière* raising and lowering at irregular intervals is disconcerting. These are the persons who sometimes laugh at the wrong time during the speech.

Lecterns get scuffed all around the base since different speakers prop their feet in different places. One speaker may embrace the upper part of the stand as though it were Miss America. Meanwhile his lower torso will be unrestrained, since much of

the weight is borne by the arms. This allows first one foot and then the other nervously to explore the uneven terrain.

A really good speaker may want to dispense with the lectern entirely. He knows that any subject worth inflicting on an audience for a solid hour should be dignified by preparation. So he studies. He weighs his points. He sifts out, arranges and polishes until he has something he really wants to say. He decides about how he expects to say it. When he gets up to speak he may prefer to hold his notes in his hand, preferably with a stiff backing so they won't rattle.

He will stand easily in one place, moving some, but not all over the platform. He will gesture with his note hand as the occasion demands and read from his notes openly when necessary. Audiences don't mind notes, and pay no attention to them when they are used openly and with no undue reference to them. Good speakers nearly always base their addresses on notes. Some memorize, but most of them keep the notes at hand for ready reference. Notes are a blessing to the listeners. They keep the speaker on his subject.

If he uses the lectern for the notes the good speaker will stand behind it. If he needs glasses he will wear them, and not keep them dangling and shifting all through the hour. As to the lectern itself, he will not lean on it, pound it, nor jiggle it precariously at one corner. He will not wipe his feet on it, nor pretend he is a clinging vine on a favorite tree.

Anyone respecting a lectern in such a way may be in for a surprise. He might even catch his audience listening to him for a change.

MAJOR HAL D. BENNETT
Chaplain, USAR

How Good Is The Target-Grid?

Has anyone stopped recently to take a long look at the target-grid method of field artillery observer procedure? When it first came out it looked like the dream system—the kind the greenest forward observer or doughboy could shoot with excellent results. But, it hasn't taken too long to spot some of its limitations and disadvantages.

First, it appears that the between-round interval was somewhat longer than in the old methods. Compared with the range and deflection bracket-

ing procedure and the old battery commander method, this loss in time was probably offset by the fewer rounds needed in adjustment, so it came out about even. Compared with air-ground methods (FO procedure), the observer was definitely no better off unless he was eye-level with billiard table terrain. Even then, the target-grid system lost some of its advantage when a sizable angle T gave a broadside view of dispersion.

The absence of factors didn't help the observer. It still took him the same number of rounds with a longer between-round interval. Result — more time in adjustment, less effect on fleeting targets, and more time-over-target with his thin skin exposed.

Since every shot had to be plotted three firing charts were needed (each set up for both HCO and VCO) for simultaneous missions. In a CP tent with 31 x 42 drawing boards and 26-inch range-deflection fans for 155-mm guns, this vastly overcrowds.

Considering all this, it looked like the greatest benefit would come from the saving in observer training time and the fact that the infantry, the AA people, and anyone who could measure and use a mil could adjust field artillery fire accurately. A recent combat bulletin from TAS seems to bear this out in part. But, later on in the same report our hopes are dimmed somewhat. I quote, "There was a feeling among some artillery commanders that a knowledge of Change 2, FM 6-40, 1945, (range and deflection bracketing method of adjusting artillery fires) would materially help observers and FDC personnel to more fully understand artillery gunnery." That means more observer training and we're headed right back where we started from.

I don't have the approved solutions to these problems, but I have some thoughts that might serve as starting points.

(1) Why not rid ourselves of the basic evil of the target-grid method (the necessity of plotting each sensing) by a mathematical, rather than a graphical, method of compensating for the observer's displacement from the gun position? It can be done by a series of precomputed charts for each 100 mils of angle T or by some other device such as a French irregular verb wheel. The FDC computer could then revert to rapid calculation of commands from sensings and would give commands in shifts, left

and rights, as of old. The ground observer would still shoot without factors, but both he and the air observer would get their rounds more quickly. Also, the 3-chart bedlam in FDC would be eliminated. The S3 could settle back and enjoy life with only 2 charts, one each for the HCO and VCO.

(2) Or, if that's too drastic for you, let's help the air observer at least to the extent of computing mathematically, rather than determining graphically, the commands for his rounds. First, plot the initial data using the target grid, and then forget about them. When the air observer says, "LEFT 200, REPEAT RANGE," when the 100/R is 12, let the computer add a left shift of 24 mils to the last deflection and let her fly. If there's a range change, slide the GFT runner up or down the stick the required distance and read off the elevation. That extra link in the chain, the HCO, is simply wasting the air observer's time by plotting and announcing data except for the initial round.

Finally, let's give consideration to this general thought. It's in the American tradition, I suppose, to make things as easy as possible through gadgets that reduce effort on the part of the user. But, we should recognize that artillery firing is a fairly complicated business. No matter how many labor-saving gimmicks we have, it still takes trained brains on the observing end to make it work. By the use of these gadgets, we can simplify techniques and reduce training time only so far without reducing effectiveness at the same time.

CAPT. WILLIAM R. ENGLISH
Artillery

The One-Page Fallacy

The major picked up the letter and without reading a word hefted it back to his assistant.

"It's too long," he said, "The boss will never forward it for signature. Take it back and boil it down."

He had struck another blow for efficiency. Perhaps he was lucky to have a staff big enough to prune, write and rewrite endlessly. Or maybe it was just the common mannerisms of every underling with a pretension of efficiency.

It's my own belief that you can't do business on the blind assumption that long reports are more dreadful than inadequate reports. Of course

you can write a one-paragraph letter as a covering page and refer to an enclosure, and then put everything you want to say in as many pages as you need. You can often get away with this method of getting around an obstacle actually established in the name of efficiency.

The point is—whose time is being saved by a short letter? If a letter is to be read by a top-flight executive, saving him minutes may justify hours of rewriting. But how far can it go before it becomes a silly waste of time? How long does it take to read a letter as compared to the time it takes to write one? Consider the absurdity of all the GS 11's who churn for hours over letters so other GS 11's will have three paragraphs to read instead of four or five.

Consider, too, the time of the typists who retype version after version. We could also save quite a bit of letterhead, carbon paper, and flimsies if we had the courage to mail a less than perfect letter.

Breaks, pauses, correctives and transitional phrases are important in the grasp of written material. If you know your reader has a quick, powerful mind, you can boil your message down to a few key phrases. But if you know that the usual cohorts of clerks, scribes, and unit heads are to handle the letter after the big man has initialed it, you had better spell out the implications and the whys and wherefores. The great man may grunt impatiently as he skims your paragraphs, but the little people will be saved much pondering bewilderment.

If the page is to summarize facts and events related to the recipient's work, then the shorter the better. He already knows enough of the story that lies behind your terse sentences. But suppose the reader last heard about the matter six months ago? Will a short letter or a longer one be better for him?

Certainly we don't want long-winded compositions clogging up the channels. But neither should we delay our communications by insisting on tiny paragraphs beautifully centered in the middle of great bare sheets of paper. This is really a form of hidden bureaucracy and means either misplaced effort and waste, or the development of some bootleg method of getting around the blind rule.

LT. FREDERICK C. DYER
USNR

NEWS OF THE SERVICES

INFANTRY

Korean Students

In teaching its new class of Republic of Korea officers, who began their course on 4 October, The Infantry School is facing one of the most interesting challenges ever to confront it.

Not the first non-English speaking class to appear at the School, this one does present a bigger problem, so far as the language barrier is concerned, than any in recent history. Virtually all the students are non-English speaking. The difficulty is being surmounted through the use of 15 English-speaking ROK Army officer interpreters. This group arrived at Benning in advance of the class, was oriented, and class procedures were worked out before the arrival of the student group.

Now each instructor conducts his conference in English and it is translated on the spot by an interpreter. Each class requires the use of from one to fifteen interpreters. All written material is given to the students in their native language.

That the system is working well is apparent in the reaction of the students to the instruction.

About 80 per cent of these officers will return to Korea after the 20-week course to become instructors. The rest will be assigned to ROK combat units.

Orientation Conference

An orientation conference for infantry instructors at ORC schools was held in October. Sixty-six officers attended.

The course was held to orient these officers on the instructional material furnished their schools by TIS. They were also instructed on methods of presenting the material and received briefings on the latest infantry tactics and weapons developments.

Films

Hollywood on the Upatoi is still functioning. "Infantry Battalion in Defense," biggest training film undertaking we've had so far, is progressing well. The picture is tentatively scheduled for release sometime during the winter.

"Achievements and Traditions of the Army," a new film, has been authorized by Army Field Forces and is being prepared by The Infantry School.

The film will develop the history and achievements of the American soldier from the birth of the Republic through the war in Korea, emphasizing the important role of the soldier in the history of the United States. It will stress, particularly, the combat soldier.

This new film, together with two existing films and related lectures, will fill out six hours of the basic training cycle devoted to indoctrinating the soldier with pride in the Army, developing *esprit de corps* and raising his morale.

Rangers. The Ranger Training Command has gone out of existence as a separate organization. It was reestablished as the Ranger Department of The Infantry School. It is charged with the continuous study and development of Ranger doctrine and the preparation and conduct of the Ranger training course.

OCS. OCS enrollments took a big jump in November. Originally two classes a month were scheduled to begin in November and December. This has been increased to four each month for these two months. Beginning in January, 56 classes are scheduled for the next calendar year.

Visitors. Other service schools are sending their students to Benning again this year to get a picture of how the man up front does his job. The first of these classes were the Armed Forces Staff College, Norfolk, Virginia, and the Medical Field Service School, Brooke General Hospital, Fort Sam Houston, Texas.

Quarterly. The new *Quarterly* is out. The lead article, "Operation Ripper," is exceptionally interesting. It is a condensation of the commander's report on the Han River crossing operation conducted by the 25th Division in March 1951. The operation was a classic of its kind; nearly everything was done according to the book and it was highly successful.

ARTILLERY

Fort Sill

Missiles Course

The field artillery phase of guided missiles instruction has been added to the curriculum of the Department of Materiel. It is taught to officers of the advanced class, the corps artillery officers' class, and the officer candidate classes.

Concerned with the "hardware" phase the course covers launchers, propelling systems, guidance systems, and warheads.

Air-Ground Operations

Instruction in the air-ground operations system and the fire support coordination center has been added recently to the curriculum of the Department of Combined Arms.

The former includes the organization, mission, and function of the air-ground operations system; the tactical air control

system; organization of aviation for tactical employment; and the capabilities and limitations of tactical aviation. It is based on FM 31-35, battle reports, and approved lectures from The Air University.

The fire support coordination center conference deals with the organization and operation of the fire support coordination center at corps and lower levels to include special application in amphibious operations. It is based on TC 23, 1951, and a TAS Special Text (Organization and Functions of FSCC).

These periods are taught to most of the general courses at TAS, the refresher courses for senior artillery officers, and selected troop officers stationed at Fort Sill.

Training Aid

A new training aid for observed fire instruction is under experiment in the Department of Gunnery. The new device is designed for use with the visual cast in classroom practice of forward observer procedure.

The working model of the new training aid, now complete, allows terrain pictures projected by the visual cast to remain on the screen while the "bursts" appear and disappear. With the present method, the terrain picture must be flashed off the screen in order to place and remove bursts.

ROK Students

One hundred Korean officers and 10 Korean interpreters began a special Allied Officer Course at TAS on 8 October 1951. The 20-week course closely conforms to the associate field artillery battery officer course.

Most of the officers are in the South Korean Army. However, some of them were former members of the North Korean Army who escaped to South Korea to evade Communist rule. Some were in the Japanese Army during the last war.

About 50 per cent of the visitors speak English, and interpreters handle the language difficulties of the others. Interpreters worked two weeks before the course began to translate notes for students and to solve difficulties in presenting training films. Instructors and interpreters previewed the films many times so that when the films were shown the sound track was eliminated and the interpreter narrated.

After completion of the course, the Koreans will become instructors at their own artillery school or unit commanders.

Mass Production

Over 1,000 students graduated from artillery courses at Fort Sill during the period 22 September to 13 October.

Eleven officer courses accounted for 605 graduates, and 138 enlisted men received diplomas in 16 courses.

Organized Reserves

Director's Course. ORC school directors from all army areas were given a one-week orientation course at The Artillery School 12-17 November. They were told how to use the ORC school instructional material prepared by the civilian components branch of the Department of Training Publications and Aids.

During the course, the directors were briefed by officers of the resident instruction on doctrine and techniques taught at TAS that are pertinent to the ORC schools.

Schools. With 57 more field artillery ORC schools expected to begin their three-year training cycle in January 1952, there will be 102 artillery schools operating in major cities throughout the United States. The schools offer the field artillery battery officer course and the associate advanced course. The 45 schools already in operation will begin their second year training in January.

The battery officer course is for battery-grade officers and the associate advanced course is for field-grade officers and those battery-grade officers who have completed the battery officer course. These courses are similar to the associate courses taught in resident instruction at TAS.

The Artillery School furnishes the ORC schools with programs of instruction, subject schedules, instructors' manuscripts, lesson outlines for students and instructors, instructional writs and solutions, illustrative problems with solutions, and training aids. This material is revised each year and shipped to the schools in September for use in January of the following year.

Schedules. The following ORC subject schedules have been published and distributed recently:

- 6-102 (Orientation and Characteristics of Unit Weapons)
- 6-103 (Organization and Mission of 4.5-inch Rocket Battery)
- 6-104 (Orientation and Characteristics of 4.5-inch Rocket Launcher)
- 6-105 (Orientation and Characteristics of the 105mm Howitzer and Secondary Weapons)
- 6-106 (Orientation and Characteristics of the 155mm Howitzer and Secondary Weapons)
- 6-107 (Orientation and Characteristics of the 155mm Gun, Self-Propelled, and Secondary Weapons)
- 6-108 (Orientation and Characteristics of 8-inch Howitzer and Secondary Weapons)
- 6-109 (Orientation and Characteristics of 240mm Howitzer or 8-inch Gun and Secondary Weapons)

- 6-110 (Organization and Mission of Field Artillery Battery)
- 6-116 (Installation and Organization of Command Post)
- 6-127 (Reconnaissance, Selection, and Occupation of Positions, Field Artillery Battery)
- 6-132 (Tactics, Forward Observer Sections, Field Artillery Units)
- 6-135 (Decontamination and Destruction)
- 6-146 (Communication Training, Forward Observer Sections, Field Artillery Units)

Forty-one subject schedules have been submitted to AFF for approval and 10 are in the process of being completed at The Artillery School.

ROTC. Approximately 7,500 prospective artillery officers are currently enrolled in ROTC artillery units at 39 colleges and universities in the United States and Hawaii. The ROTC units constitute the largest single source of officers for both active and inactive elements of the ORC artillery units.

The Artillery School furnishes the subject schedules that guide the three-year program of instruction for cadets. These schedules aid the instructors at the colleges in making up their lesson plans. They briefly outline the material to be covered, suggest the amount of time to be allotted to each section, and include training aids and references pertinent to the subject. The scope of these subject schedules is established by the appropriate Army Training Program.

Three subject schedules have been revised and will be distributed soon to maintain instruction at the highest possible level. Over 7,000 transparencies for use with visual cast projectors have recently been distributed to ROTC units to be used as training aids during instruction.

Extension Courses

Ammo. Subcourse 20-5 (Artillery Material and Ammunition), is being revised. Changes in doctrine and techniques will be incorporated in the revised edition, which will be available in December.

Map Reading. Subcourse 30-11FA, Revised (Map and Aerial Photograph Reading for Field Artillery) is now available. New features of this subcourse include the universal transverse mercator grid system and the new map symbols which appear in the latest FM 21-30 (Military Symbols).

Meteorology. Subcourse 30-20FA (Field Artillery Meteorology) has been revised to reflect the latest doctrine and is now available.

AAA Gun Bn. Subcourse 40-21AAA, Revised (AAA Gun Battalion) is being prepared for publication and should be available early in December.

AAOC-AAAls. Subcourse 40-23AAA (AAOC and AAAls) is now available.

Divarty. Subcourse 50-2FA, Revised (Division Artillery in Defensive Action) has been service-tested and is now being prepared for publication. This revised edition includes instruction on employment of armored division artillery as well as infantry division artillery. This subcourse should be ready for distribution during December.

Explanation. The Department of Extension Courses frequently is asked by students, "Why do I receive subcourse 20-9 first, then get 20-6, or some other number?" The answer is that subcourse numbers are now used merely for identification in most of the series.

Extension course students are sent subcourses that are most pertinent to their branch before they are required to take the branch immaterial courses. The Department of Extension Courses believes this practice generates more interest. It also gets across the mobilization subjects to those officers who take only a few courses and then find that they cannot continue.

Fort Bliss

Birthday

In the six years of its existence, the guided missile organization at Fort Bliss has grown from battalion to group size and the scope of its work and importance has increased accordingly.

The 1st Guided Missile Battalion was activated at Fort Bliss on 11 October 1945. Less than three years later, in May 1948, it was expanded to a regiment. And in April 1950, the 1st Guided Missile Group came into being. It now has a strength of more than 1,300.

The Group's mission is fivefold. To assist the Department of the Army in developing and testing guided missile artillery, organization and training doctrine, and guided missile tactics, techniques and logistics; to provide trained cadres, fillers, and replacements for guided missile units; to assist in the conduct of engineering tests, user tests, and troop tests of guided missiles; to engage in advanced individual, unit, and combined arms training for the employment of guided missiles; and to provide trained cadre-men, fillers, and replacements for radio-controlled airplane target detachments.

In order to carry out its mission, the Group stations batteries and detachments at the most important guided missile test and development centers. Its troops are now located, not only at Fort Bliss, but at White Sands Proving Ground, N. M., Chino Lake, Calif., and Point Mugu, Calif. In addition, small detachments of officers and men are periodically sent to the factories of the various guided missile contractors for short periods of time.

The Guided Missile Group personnel at Fort Bliss have two specific training missions: to conduct a basic guided missile course of instruction to qualify personnel as guided missile crewmen; and to train for and fire missiles as they become available for training purposes.

Currently the men are firing the Army's Lark and Loon missiles on the Fort Bliss range.

Minimum requirements for assignment to the 1st Guided Missile Group are higher than those required by most Army units. Men must have an aptitude I score of at least 100. In addition they must have an electrical or mechanical training background or aptitude. A number of the men assigned have degrees in various engineering fields.

Brass Class

Five officers of general rank were among the 71 high-ranking military and civilian officials who attended a senior officers' guided missiles orientation course at Bliss.

The course featured the study of guided missile power plants, guidance control systems, the present state of development and tactical employment of surface-to-surface and surface-to-air missiles, and other related subjects. Visits to the 1st Guided Missile Group and to White Sands Proving Ground were included in the class schedule.

Field Graders

Sixty Army, Navy, Air Force and Marine Corps officers, mostly colonels and lieutenant colonels, attended a three-and-a-half day senior officers' guided missiles orientation course at Fort Bliss.

The high-ranking students received an intensive course of instruction emphasizing the present state of development of various types of missiles and their tactical employment. Classroom sessions were varied by a trip to the 1st Guided Missile Group area; to White Sands Proving Ground, N. M., to see missile firings and tour the installation; and to the Fort Bliss ranges to see antiaircraft artillery firing.

The AA demonstrations included firing in support of infantry and firing of medium, heavy and light antiaircraft at aerial targets.

OCS Opens

An Antiaircraft Artillery Officer Candidate School opened at Fort Bliss in November.

Upon completion of the 22-week course, students will be commissioned and qualified to go directly to duty with Antiaircraft Artillery units. Those officers who are assigned to field artillery units will go to Fort Sill for additional training.

The AAA OCS quota will be about 2500 officer candidates annually.

Sill to Bliss

More than 300 officers from Fort Sill spent eight weeks in antiaircraft artillery training at Fort Bliss. They were members of an advanced Artillery officers class. Following the study of antiaircraft artillery, the group will resume their studies at Fort Sill.

SIGNAL CORPS

Higher & Higher

A new miniaturized Signal Corps radar beacon and other electronic equipment to be carried aloft by rockets will permit these missiles to probe higher into the upper atmosphere in search of weather facts.

The reduced size and weight will not only cut the payload, enabling the Aero-bee rockets to zoom 35,000 feet higher to a 300,000-foot mark, but also improve the tracking and safety devices of the flight.

The beacon, which relays signals from and to radar sets on the ground to indicate the rocket's position, has been reduced by two-thirds in weight and by more than six times in volume. New subminiature tubes, condensers, resistors and other electronic devices developed at the Signal Corps Research Laboratories make this advance possible.

Tracking the rocket's instruments on the downward journey to earth for recovery and study will also be improved by a new type antenna to be flush-mounted in the rocket's skin. The new design insures a continuous flow of signals to the tracking radar set on the ground regardless of the amount of tumbling in space.

Film from Korea

Up to the end of September the Photographic Center at Long Island City, New York, had processed 780,319 feet of motion-picture film shot by Signal Corps cameramen in Korea. This footage is used in newsreels, training films, film reports, historical films, and information films. During World War II about 100 million feet of movie film were shot by Signal Corps movie photographers in every theater.

Supply Information

To expedite the Army's daily collection of information on the state of its supplies, the Signal Corps has instituted a teletype-writer network. The information—formerly sent by mail—will go to a national control point for each of the Army branches involved in supply.

The first major portion of this "Technical Services Reporting Network" recently was instituted for the Quartermaster General, connecting seven field installa-

tions in the United States with a control point in Washington. It provides up-to-the minute information as to the status of supply at each depot. At the control point, the information from each depot is consolidated and prepared for dissemination the following day.

MILITARY POLICE

Civil Police Cooperation

Close cooperation between military police and civil law enforcement agencies are essential in times of national emergency. Maj. Gen. E. P. Parker, The Provost Marshal General, told the International Association of Chiefs of Police. General Parker emphasized the assistance that civil police agencies can provide the armed forces in furnishing experienced police specialists for military police assignments, in apprehending absentees and deserters, and in eliminating conditions which breed trouble and crime in areas frequented by military personnel.

Street Fighting Course

Experiments with a new street fighting course at the Military Police Replacement Training Center, Camp Gordon, Ga., are underway. The course includes both the combat clearance of cities and towns and the evacuation of hostile mobs, partially armed, from buildings and built-up areas. It includes such features as the reduction of roadblocks and barricades, covered by hostile small-arms fire, which might be erected in built-up areas.

PMG Technical Bulletins

The first two in a series of technical bulletins covering specialized techniques and procedures in the field of criminal investigation have been published. They are TB PMG-1, "Narcotics, Marihuana," and TB PMG-2, "Counterfeiting."

Two other bulletins in this series, "Blood and Body Fluids" and "Component Comparison—Firearms Identifications," are scheduled for early publication.

Military Government

A special four-weeks' Military Government Officer Course, pointed directly to current civil assistance activities in Korea, opened 5 November at The Provost Marshal General's School, Camp Gordon, Ga. The class was composed entirely of officers scheduled for early assignment to the Far East Command.

New MPC ROTC Unit

Activation of a Military Police Corps ROTC unit at Florida Southern College, Lakeland, Fla., brings to fourteen the number of such units now in operation. Maj. Gen. E. P. Parker visited the new unit early in November.

BOOK REVIEWS

Revelment of a Leader

GEORGE WASHINGTON. By Douglas Southall Freeman. Charles Scribner's Sons. Vol. III, 600 pages; Vol. IV, 736 pages; Illustrated; Index. \$15.00 set.

The large number of military and other readers who have read Dr. Freeman's earlier works, *R. E. Lee, Lee's Lieutenants*, and *The Young Washington*, and who have been awaiting with some impatience for these next two volumes of the eventual eight in the Washington biography, can now feel well rewarded. For these two volumes are of deepest interest to the reader who particularly enjoys good writing on the American Revolution. And what military reader doesn't?

In these two volumes we see Washington developing, in the 1760s and early 1770s into a leading citizen of Virginia with a reputation fast growing beyond the borders of that Commonwealth. We see Washington enjoying his home and its broad acres at Mount Vernon, but becoming sought after more and more for his common sense counsel as tension grows with Britain, and leaders in the several Colonies grow convinced that Britain's harsh treatment of them is intolerable. The early Continental Congresses, the heart-searching meetings of the Virginia House of Burgesses and the different committees appointed to make recommendations, the extensive correspondence with leaders in his own and other Colonies, all of which gradually involved Colonel George Washington of Virginia more and more deeply—all of these are brilliantly portrayed. But no more so than the opening struggle of the war, the desperate efforts to assemble, equip, feed and hold the Continental Army, as well as the doubtful results of the early battles, most of them losing ventures.

Lexington and Concord we see reported by messengers to Washington at Mount Vernon. Bunker Hill is fought before the Congress has decided to establish an inter-Colonial force. To the surprise of many, Sam and John Adams and other delegates from New England support George Washington's nomination for commander of the forces. From a strong sense of duty, which today appears to have been combined with an inner certainty of the vital march of events, Washington accepts the proffer of leadership from his fellow delegates.

We see then in all its colorfulness, his journey to Boston and his taking of command. And then the march of military events begins, and instead of a forward march, it is almost steadily backward—withdrawal, retreat—withdrawal, retreat—

from Boston to New York, New York to New Jersey, with nothing but defeat to report to Congress when the Army meets the enemy. Withdrawal and retreat, almost to the point of despair, until the glorious, if little, victory of Trenton breaks the gloom, the course of continued "retrograde movement."

And never has Trenton—or any of the other encounters, for that matter, been so vividly recounted, or in such carefully documented detail. You need never, even, to have seen the Delaware, for Dr. Freeman puts the whole scene, the plan, the crossing, the march of the columns, the surprise, the quick complete capture—puts it all into the mind's eye, almost as if you had been with Washington or Greene there on the snowy, stiff-rutted Christmas roads to Trenton.

The fourth volume, the second of the two new ones, goes on through the bitter dreariness of Valley Forge, the stalwart heart-searchings caused by the crooked Conway Cabal—on through Saratoga at a distance and the encouragement brought by the knowledgeable Steuben and the romantic LaFayette, up to the time of Monmouth.

And in this first two years of Washington's command experience, we also see the testing of the generals, including General George Washington himself. The proud Charles Lee, the jealous but able Gates, the slow-thinking, aging Putnam, the indefatigable Nathaniel Greene, perhaps the best of all, certainly dependable and capable, if you allowed sufficiently for his optimism—these and the rest either pan out or do not in these years, and mostly not. For none of them has commanded any forces of size before the war and many are political compromise appointees, and all are jealous of their relative rank, and one at least wants Washington's place. Thus we have "Washington's Lieutenants" along with Washington himself—this time in the same set of volumes. And a great biographical bargain all told it is.

And you finish Volumes III and IV with just one thought. "How soon will Volumes V and VI be off the presses? Hope we won't have to wait so long this time!"—G.V.

Remarkable Research

THE MACHINE GUN: History, Evolution, and Development of Manual, Automatic, and Airborne Repeating Weapons. By Lieutenant Colonel George M. Chinn, USMC. Vol. I of three volumes. Prepared for the Bureau of Ordnance, Department of the Navy. 688 Pages; Illustrated; Index. \$5.00.

One day long ago a man threw a rock at another man and killed him with it, thereby discovering that it was safer to kill an enemy with a missile from a distance than by engaging him at close quarters with a club. From the rock he progressed to the spear, then to a missile propelled by a bow or sling. Civilization had to wait for one Dionysius, tyrant of Syracuse, to demonstrate that the business of destroying one's fellows could be done on a mass basis. He invented the *Polybolos*, an engine used by the Greeks against the Carthaginians in 397 B.C. This device fired a volley of arrows from a magazine. And thus began man's long struggle to perfect a machine that dealt out death in quantity. Thirteen centuries were to pass before mobile, sustained firepower was achieved, to the extent that it could be placed in the hands of an individual. It was at Hastings that archers first used a mechanical bow that fired arrows from a magazine.

After it was demonstrated that gunpowder could be put to military use, someone in 1339 brought out a multi-barreled affair of iron tubes that fired simultaneously. The idea was to bowl over a rank or two of heavily armed pikemen whose job it was to defend the bowmen from charging cavalry. By 1887 this cumbersome engine grew to 144 barrels grouped in batteries, so that twelve salvos of twelve balls could be fired. By 1718 an Englishman named Puckle had reduced this monster to a tripod-mounted, single-barreled weapon fed by a revolving cylinder. About the same time a Bostonian, Elisha H. Collier, brought out a revolving flintlock gun; its cylinder rotated upon releasing the trigger after firing, tension being provided by a hand-wound spring.

The advent of the percussion cap spurred development. Farries of Middletown, Ohio, in 1829 was granted the first patent for a "machine gun," which meant that he had invented a weapon of rifle caliber that was mechanically operated. The percussion cap was put to further practical use with Colt's production of the multifiring hand weapon in 1836. Man struggled on with the problem of nonstop firing. The Belgians in 1857 turned out a weapon that fired 100 rounds a minute from fifty barrels of rifle caliber assembled parallel to one another. Range was 1.25 miles. Other armies had their models, but all employed the multi-barrel principle.

During the Civil War both sides used machine guns, with improved models under development at war's end. The Yankees' Billinghamst Requa .58 fired 25 barrels in volley. They had the Agar .58 single-barrel that was fed from a hopper resembling a coffee grinder, the Claxton double-barreled .69, and Gatling's gun. The Confederates had the Williams smoothbore 1.56, the Vandenberg (he was a Yankee general, by the way) .50 volley

gun of 85 barrels, and even a revolving cannon. Their Gorgas 1.25 was under development when the war ended.

Richard Jordan Gatling's gun with improvements survived as the American automatic gun. The bolt of each of its six .50 barrels was fired by turning a crank. Gatlings saw service at Gettysburg and at Petersburg, although the Army wouldn't adopt it until 1866 (the Navy in 1862). His guns endured to the Spanish-American War, where Captain John H. Parker, who had long since visualized the potentialities of automatic fire by infantry, succeeded in getting them used in battery. (Until the Germans threw things out of kilter, the universal doctrine was that machine guns should be used as artillery, and were not infantry weapons at all.) But for Parker, Gatling's gun might have become obsolete without having been fired by our army in combat. It passed out in 1911. No gun of its time exceeded its rate of fire: 3,000 rounds a minute from ten barrels. The contemporaneous Vickers single-barrel approximated 800 rounds. Gatling is practically unknown among Americans today, though his name is perpetuated in abbreviated form in underworld slang.

Meantime, Europeans were at work. They turned out the *mitrailleuse*, which embodied Gatling's improvements. It failed in the war of 1870-71 through misuse. There emerged the Farwell .45, the Hotchkiss 37mm revolving cannon, the Gardner .45, the Robertson .30, the Lowell .50, the Wilder, the Bailey (first to use a belt feed), the Nordenfolt .45, and the Taylor. All were manually operated and all depended on tow or transport.

In 1884, Hiram Maxim, an American electrician, announced to the world that he had made "an automatic machine gun with a single barrel, using the standard caliber .45 rifle cartridge, that will load and fire itself by energy derived from the recoil at a rate of over 600 rounds a minute." Besides the belt system, it could be fed by a drum of 96 cartridges. It could be regulated to fire a single shot or bursts of 10 or 20 or 100 per minute, or to maintain a continuous fire, fast or slow. In the M1893 a water jacket was added.

Refinements by the several European armies by 1914 had produced a variety of calibers and mounts. There were the M1893 Skoda which had a steel frame receiver and a shoulder rest; the St. Etienne, the Benét-Mercié (our standard machine gun until 1917) and other Hotchkiss models; the Nordenfolt, DeKnight (Pratt & Whitney), Madsen, the Bergmann and Dreyse families, the Italians designs, the U.S. Navy's Carr, the Schwarzlose, the McLean, the Berthier, the Kjellman, the Laird-Menteyne, to mention a few, most all forgotten by now.

Despite the trend, the U.S. hadn't much in the way of machine guns when we went to war in 1917; the brass couldn't make up their minds as to what was

wanted. Actually, we had 670 Benét-Merciés, 282 M1904 Maxims, and 158 M1895 Colts; our requirements were conservatively estimated at 100,000. Germany three years before had started with 12,500 up-to-date Maxims with another 50,000 on the benches. American troops were issued the Chauchat machine (rifle) gun (Shosho in AEF parlance) which could be fired from a sling for marching fire or from a bipod on the ground. We bought them from the French and issued them to divisions as they arrived. During the period of indecision John Moses Browning came to Washington to demonstrate his heavy, water-cooled machine gun and his machine rifle (we know it as the BAR). The easily constructed mechanisms sold them to the Government. But real production had to wait until middle 1918, and while figures are impressive, only enough Brownings got overseas to supply the machine-gun schools. When the war ended only a very small portion of the AEF was equipped with Brownings. We had to get along with French and British surpluses. Browning's company allowed the Government to set its own price, and final remuneration amounted to less than a tenth of what our Government usually paid inventors. It is unnecessary to remind Americans of this and the preceding generation of Browning's contributions to the American arsenal. A Secretary of War is authority for the statement that no Browning design ever proved a failure nor has any model been discontinued.

The organization of Part IV, labeled "Automatic and Airborne Weapons," is perplexing, for it deals with ground and aircraft machine guns and automatic rifles. But perhaps the author had a purpose. (What is the difference between a machine rifle and an automatic rifle?) Here we find amply described and illustrated ground and aircraft weapons with which we are more familiar: groups like the Lewis, Vickers, Browning, and German MGs (Rheinmetall and Mauser). Nambu. And there are many groups but little known in our army that we should know more about, for they may be encountered.

Automatic aircraft cannon (a machine gun by another name) are covered in the final section, necessarily to a limited extent. "While quite ironically the bulk of our source material is in this particular field, due to security reasons the amount that can be openly discussed has become less and less." For that reason, only those models are described which led to improvements resulting in what are current or obsolescent models. The first artillery piece fired from our aircraft was the Davis non-recoiling gun, used by the Navy in World War I. It was the granddaddy of the bazooka or recoilless rifles, operating on the same principle. Conventional cannon had been fired from aircraft before, the first being the Vickers

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By Lt. Col. Robert B. Rigg

Shielding Russia's armed might stands a huge Chinese Communist Army, battle-tested, motley, rough, ruthless—whose vanguards we face in Korea today. Here is a description of the Chinese Red Army by an officer who served with it and saw it



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OFF-DUTY READING

Santa's Suggestions

CHRISTMAS shopping all done? Haven't forgotten anybody? If you haven't, you're lucky. Very probably not normal, either. For our people in Europe and Korea, and scattered in odd corners of the world, this column may be too late to do very much good. On the other hand, the sort of books you'd want to give people are books for all the year—books that will be as pleasant to re-read in July as at Christmas-time.

There's an art to giving books that has very little to do with how much they cost. A book that costs a dollar, if it is wanted and suits the taste of the person who receives it, will bring far more pleasure and gratitude than an expensive set that will be put on the shelf and never opened. Take the little book about Pogo, the most improbable possum to ever grace a comic page. *Pogo* sells for \$1.00 and will probably delight thousands of children and adults who will get a copy this Christmas.

Too often book-giving is casual—involves too little thought and too much dependence on the best-seller lists. Not that best-sellers aren't often good books, but the fact that a book is a best-seller doesn't necessarily make it good. It is regrettable but necessary that publishers also have to eat. If you can't get to a bookstore to browse, the best thing you can do is cultivate a reliable bookseller and ask his advice on the quality and the existence of books for friends whose interests you know—and for yourself, for that matter.

SOME of my favorites this year wander through a wide range of subjects. Some of them you've already seen in this column, and I'll run through as many others as I have room for.

Gods, Graves, and Scholars, by C. Ceram (Knopf; \$5.75) is about as fascinating a story of archaeology as you'll ever find. Here is a man with knowledge and the gift for sharing it making interesting and intelligible a subject most people think of as dust-dry.

Gallery of Western Painting, by Raymond Carlson (McGraw-Hill; \$8.50) has little in it the enthusiast will not have seen before. For somebody with a budding interest, the book is an education, and is a beautiful addition to any collector's library. Gorgeous color.

In about the same class is Bernard and Harriet Pertchik's *Flowering Trees of the Caribbean*, (Rinehart; \$10.00). Strictly for those who collect beauty caught in the pages of a book.

ALL newspapers mirror history, in one way or another. Few make it. One of the few has been *The New York Times*, notable for many reasons, but chiefly for the tradition of integrity it has come to represent. Meyer Berger chronicles the *Times*' first century in *The Story of the New York Times, 1851-1951*, (S&S; \$5.00).

FOR gifts you may have to make "blind," I'd recommend John Gunther's revised edition of *Inside USA* (Harper; \$3.00), 1120 pages of facts about America, brought completely up to date. In the same class is *The 30th Anniversary Readers' Digest Reader*, (Doubleday; \$3.50), a really well-edited anthology of the best from the *Digest* in its years of publication. Something for everybody in both of these.

—O.C.S.

(COW) in 1913. And World War I aircraft weapons had bores as large as some used in 1939-45—Revelli 25.4mm, Puteaux 37mm and 47mm, Becker-Semag-Oerlikon 20mm. Since then the list has grown in design and caliber.

This is a book anyone interested in the history of automatic firearms should own. It is a remarkable job of research that traces the long history of man's effort to produce and perfect the most deadly of battlefield weapons. The author's work is thorough, as a good Marine's always is. It delves into biography of the inventor, difficulties encountered in developing his invention, manufacturing problems, breaking down official resistance to change, and the uses made of his invention and its offspring which may or may not bear the same name. Mechanics of operation are simply explained, and every weapon is pictured. One appendix lists patents on machine guns and related mechanisms upon which the world's automatic weapons have been based. The second is a tabulation of the characteristics of aircraft, antitank, antiaircraft and infantry automatic guns and cannon.

There are weapons in existence and in contemplation that could not be discussed openly, for security reasons. Those will be in Volumes II and III, scheduled for 1952. It won't be easy to get copies, for they are already highly classified.

—N. J. A.

Negro in the Navy

THE INTEGRATION OF THE NEGRO INTO THE U.S. NAVY. By Lt. Dennis D. Nelson, USN. Farrar, Strauss and Young; 194 Pages; Appendix: \$4.00.

During the past eight years, the services have been developing a solution for fully using Negro manpower that is finally culminating in almost complete integration. This is most important since the truth of the premise that the Armed Forces cannot be a vehicle for social reform is apparent. Obviously, too, the new policy has not had any drastic impact within the armed forces.

This book, written by a young Negro naval officer, is an effort to trace these policy developments within the U.S. Navy. As far as it goes it isn't too bad but it falls far short of the penetrating study the subject deserves. There is good reason to believe that Lieutenant Nelson has been too close to the trees to see the forest. Perhaps the best examples of this are in his selection of certain widely-publicized "race" incidents within the Navy as basic causes for changes in policy. Actually, there are many more instances of Negro troops who performed their functions well, under proper leadership, with the segregative policies then in force. It would appear then that what Nelson chooses to believe were motivating causes were nothing more than incidents of poor discipline and leadership.

COMBAT FORCES JOURNAL

Nelson has developed his book in more or less chronological order following the various policy developments as they were issued. This seems to be the most valuable feature of his book and if his references are complete they will save a good deal of research time when a really definitive study of this subject is made. As a calendar of events the book lacks any really controversial matter.

Admiral Sprague points out in a brief foreword that Nelson was given full access to Navy records and since he is on active duty we can presume that his book was cleared before publication. If this is the case it is surprising that a more thorough job wasn't done. What this subject needs is the same professional thoroughness that the Navy got in its *History of United States Naval Operations in World War II*.—R. F. C.

Sensible Advice

HOW TO SLEEP WITHOUT PILLS.
By Dr. David F. Tracy. Sterling Publishing Co. 62 Pages; Illustrated; \$1.00.

This is a sensible and readable dollar's worth about something important to all of us—good, sound sleep.

Dr. Tracy tells you these things among others, briefly and simply—

- How to sleep when you're worried about money;
- How to sleep when your work is on your mind;
- How to go back to sleep when you wake up in the middle of the night.
- How to sleep when you have noisy neighbors;
- How to sleep when you're away from home;
- How to get more rest from less sleep.

Yes, it's good common sense advice, even if I did fall asleep over it before I'd read ten pages. That wasn't Dr. Tracy's fault; it was pretty late when I picked up his book to review it. His writing won't put you to sleep, but his good advice is sure to, if you need it and follow it closely.

There's nothing complicated about his

method. It's as simple as counting sheep and makes you sleepier faster. Good dope, too, on how to get maximum rest for brief periods, when you need it. A little practice—that's all it takes to sleep ten or fifteen minutes when you want to.

I'm finishing this review an hour before my usual bedtime. Sorry, but I've got to turn in now.—G. V.

Mulberrys A and B

FORCE MULBERRY. By Commander Alfred Stanford, USNR. With an Introduction by Samuel E. Morison; William Morrow & Co., Inc.; 240 Pages; Illustrated; Index; \$3.50.

In this clear account, we learn the details of the operation that built and placed the great artificial harbors, Mulberry A and Mulberry B, on the coast of France. Commander Stanford tells us what a task it was—250,000 tons of concrete and 20,000 British workmen to build the huge caissons alone. The harbors were successfully made, and landed 14,000 tons

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